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Detailed explanation of the University of Massachusetts admissions procedures employing the IBM 1401 electronic data processing system. Includes reproductions of actual data processing cards and information sheets. Discusses the basic package of seven flexible programs which perform almost all of the annual admission work. In addition, an explanation is also given of how the electronic processing system helps solve five admission problems: control and accessibility of data received, tabulation of material, solicitation of missing applicant data, evaluation of credentials, and preparation for enrollment. Copies of this report may be obtained as long as the supply lasts from the Office of Institutional Studies, University of Massachusetts, Amherst, Mass.

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ELECTRONIC DATA PROCESSING OF ADMISSIONS:

Handling Student Applicants at the University of Massachusetts

8249

William Starkweather

JUN 24 1963

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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Office of Institutional Studies

University of Massachusetts

Amherst, Massachusetts

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ED009763

ELECTRONIC DATA PROCESSING OF ADMISSIONS:

HANDLING STUDENT APPLICANTS AT THE UNIVERSITY OF MASSACHUSETTS

WILLIAM STARKWEATHER
Assistant Registrar

Office of Instutional Studies
Information Series - Number 7
April 1963

Additional copies of this report may be obtained from the
Office of Institutional Studies, University of Massachusetts,
Amherst

FOREWORD

The number of applicants for college and university admission in the United States will double, it has been estimated, between now and 1970. In the Commonwealth of Massachusetts, the number of applications for entrance to college will increase on the average by 14,000 per year between 1964 and 1967, according to authoritative projections.

How this landslide of applications can be handled equitably and efficiently is a major problem facing admissions offices. The University of Massachusetts is fortunate in having a Registrar, Marshall O. Lanphear, whose forty-two years of University service have provided a background of unparalleled experience on which to draw in meeting this challenge. Registrar Lanphear has staffed his Admissions Office with young men who are encouraged to engage in research in addition to their normal admissions duties.

William Starkweather, Assistant Registrar, is one of this team. His work in designing and programming automated procedures for handling ever-increasing admissions workloads has spanned a period of seven years. With the recent acquisition of an IBM 1401 electronic data processing system, Mr. Starkweather's procedures have been revised and updated. This report of that work is being made available in the hope that other institutions of higher education will find some guidelines or approaches that may be of value to them in meeting the enormous challenge they now face.

Certainly the admissions field is one of the most critical and exciting areas of higher education today. Progress made in this field inevitably will influence all of higher education in the years ahead.

Leo F. Redfern, Director
Office of Institutional Studies

April 2, 1963
Amherst

WHY ELECTRONIC DATA PROCESSING FOR THE ADMISSIONS OFFICE?

Being "just a number" has become in some minds synonymous with being the subject of dispassionate and cursory treatment. Yet if the applicant for admission to the University of Massachusetts knew all the facts about processing applications he would be glad to be "just a number" during much of the admissions process. Over seven thousand high school records currently compete for the attention of the admissions staff. Three times that many College Board reports and, in addition, hundreds of interview records and supplementary documents support and yet distract the admissions process. To handle this mass of material in an orderly fashion the University has turned to data processing for assistance.

Electronic data processing equipment and methods have not depersonalized the admissions process. They have simplified the handling of this great volume of material and increased the time admissions personnel can devote to the careful and equitable *evaluation* and *review* of records. Time saved in information retrieval and preliminary recording can now be devoted to personal interviews, clarifying problem situations and developing more realistic deadlines. In this process the "numbering" of a candidate has been unavoidable and beneficial.

Fortunately, substantial portions of the admissions record are objective in nature. For this reason many phases of the admissions process are well suited to conversion to electronic data processing techniques. Since the admissions "business" is cyclical, a total conversion from traditional systems of visual records to one where records can be processed electronically may be easily accomplished at the beginning of a new season. (Offices characterized by a work load which is constant the year round, such as payroll, sometimes have difficulty in effecting a change-over.) A two-stage conversion is also often practical. This is especially true where electronic data processing machines are subsequently added to mechanical tabulating equipment as part of institutional growth. A mechanical data processing system for admissions, if properly designed, is readily adaptable to electronic equipment when that is installed.

This two-step approach was employed by the University of Massachusetts, where a six-year period of basic card processing with mechanical tabulating equipment preceded the installation of an IBM 1401 Data Processing System. This report is chiefly concerned with the procedures of the second phase of the transition where processes are geared to the electronic facilities. Some of the machine products of the current system were obtained, however, during the earlier years when file maintenance routines were geared only to mechanical tabulating equipment.

THE ADMISSIONS PROGRAMS

A basic package of seven flexible programs which perform almost all of the annual admission work will be discussed in this publication. In order to understand the description of the office procedures which use these supporting electronic data processing techniques, a brief orientation to data processing machinery and concepts is first presented. The *uses of punched cards and the role magnetic tape plays* in the storage of data are explained, followed by an *analysis of the basic management problems* experienced by an Admissions Office and the ways in which the 1401 *Program Package assists* in solving them. The problems considered are:

I *Control and accessibility* of *admissions information received,* using a locator indexing file, weekly multiple-copy summary data listings, and the mechanical processing of College Board score reports (Programs ADM 01 and ADM 02).

II *Tabulation* of *material received,* provided by a weekly accounting of the status of all admissions documents (Program ADM 03).

III *Soliciting unsubmitted material in preparation for evaluation,* by means of "inventory control" techniques and mailings of request cards (Program ADM 06 and ADM 07).

IV *Evaluation of credentials submitted,* assisted by a predicted average which is provided on labels for admissions folders and is processed to afford a means of selecting and examining folders homogeneously (Program ADM 04 and ADM 05).

V *Preparation for enrollment* by providing billing and mailing data and affording an easy transition to an enrolled status.

Since procedures in admissions offices everywhere are substantially the same, and many universities seem to be contemplating conversion to an electronic data processing system, the work of the University of Massachusetts in this area may be of value to a number of other institutions. The University programs have been written in such a way as to be easily adaptable to the card and tape designs of other installations.

ABOUT DATA PROCESSING

The things which *manual* processing techniques can accomplish, in an admissions office handling over 40,000 documents a year, are severely limited. Thus, when machine data processing takes over necessary routine tasks, it is possible to obtain valuable supplementary material which would otherwise not be economically feasible to process.

The Admissions Office conveys data to the 1401 by means of punched cards — in this system through a Locator Card File and College Board Cards — and the machine responds by producing output cards or printed sheets depending upon the job required.[1] For economical processing, a Master Admissions File is maintained on magnetic tape. A 10½-inch tape reel will store more than 24,000 complete admissions records of the length used in these programs. Tape storage is used for this Master File rather than cards because tape input can be read and written 50 to 100 times more rapidly than cards.

The 1401's electronic "brain" is provided with the intelligence to perform a specific job by means of a *program* — that is, a logical series of instructions written in a special mnemonic language called symbolic programming. The program is punched into cards and a "translator" program of the 1401 system internally converts the programmer's language and punches a program deck of cards written in a more abbreviated machine language. This machine language deck can be used over and over to instruct the machine as to the way the job in question is to be performed.

ADMISSIONS INFORMATION RETRIEVAL

Information originating in punched cards and processed by the 1401 can be listed (printed), summarized (totaled), edited (checked for accuracy or modified), and manipulated mathematically (calculations and comparisons may be performed on the data). Since the computer may be endowed, by programming, with a "memory", or ability to make associations as directed, simplified codes in punched cards can elicit complex correlations. For example, the schools and colleges of the University are numbered from 1 - 9. By punching one number in Column 43 of the Locator Card, the 1401 is quite adequately notified concerning the major choice of an applicant and can respond to a programmed message such as: "If a 4 appears in the storage position for Major", print the words "This applicant wishes to major in Engineering". With simple coding of this sort a great deal of information can be relayed in 80 columns of a punched card.

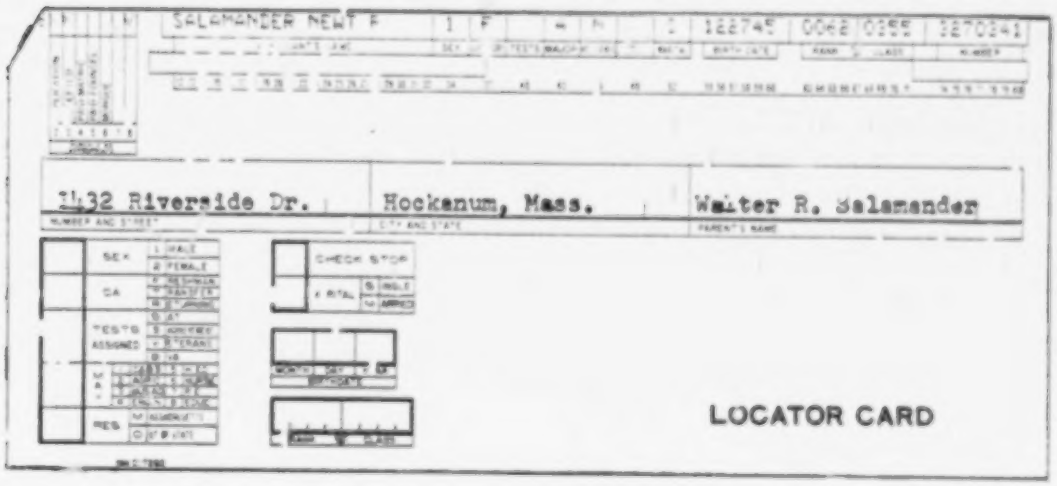
THE CODING AND STORAGE OF ADMISSIONS INFORMATION

The coding and punching of statiscal admissions information is done in two locations, the University Admissions Office and (it may surprise the reader) in Princeton, N. J. A key punch (a small console machine

1) As each application is received a Locator card is prepared. College Entrance Examination Board test results are received in punched card form. The applicant's CEEB scores are cross-referenced on tape with his Locator card (see Figure 1, p 8.)

somewhat like a typewriter with horizontal feed) is maintained in the Admissions Office for the coding and punching of a card with basic data received in the admissions process, concerning each piece of admissions information received. The card file thus created is known as the Locator File and replaces an earlier 3 x 5 index card file. Even though some of the punching necessary to produce this file is expended on the records of applicants who are not admitted and, therefore, is never subsequently "used" the daily punching distributes the key punching effort and avoids rehandling as well as a major punching job in the late spring. A sample Locator Card is shown in Figure 1.

Figure 1 — Sample Locator Card.



Maintaining a complete admissions Locator File provides reference for research studies of data for those who do not enter. This information is of benefit in subsequent University planning.[2] The office key punch also is necessary for prompt updating of the applicant's Locator Card as new data comes in or as action is taken on his application. (Note the consecutive X punches showing applicant's "status" on the upper left of the Locator Card, Figure 1.)

INITIATING LOCATOR CARDS

When an application is received, the key puncher in the Admissions Office scans and selects the statistical data to be stored on cards and subsequently transferred to the Master tape file. As these cards are punched, the key punching operation is guided by a simple "program"

2) The University's Office of Institutional Studies is currently engaged, in cooperation with the Admissions Office and the Dean of Students, in a summary of what has happened to applicants who were not admitted or who did not enroll in the University in the fall of 1962.

drum which moves the blank Locator Cards into position and guides them through the machine in such a manner that the operator need only type the information on a keyboard similar to a typewriter. The punching also is interpreted (printed) simultaneously by the machine at the top of the card. Because the card can transmit only 80 characters in its 80 columns (the name uses 20 letters, or characters, for example), not all of the data can be punched which will eventually be transferred to the undergraduate data processing files at the time of actual enrollment. The home address and parent's name are typed on the face of the card for punching at a later date, if the student is admitted. Newly created cards are hand-filed daily into the Locator Card File. As any action is taken affecting the status of an application, such as acceptance or rejection, the appropriate Locator Card is pulled from the file by the secretary processing the change (writing the letter of notification, for example) and it is placed in an appropriate suspense file (box). Cards from the suspense file are daily punched for updating and then refiled.

USING CEEB REPORT CARDS

The University's admissions coding system was designed to avoid duplicating labor already expended by the College Entrance Examination Board as it punched the 15,000 - 20,000 test reports sent to the University each year. Utilizing the optional punched card report provided by the Board, a document that is immediately machineable, affords a tremendous saving in clerical time. The second, paper copy of each CEEB report is set aside as a duplicate reference. It is used in cases where a previous test report, listed on the paper copy but not punched in the companion card, may not have been submitted on a punched card at the time it was taken.

Prior to the use of any sort of machine system, each test report that was received was looked up in the 3 x 5 index file in order to locate an application or to check if an application had been received as yet. The test scores were manually entered on the face of the candidate's admissions envelope, and the report was filed away. If no application had been received an index card had to be made.

During the punched card period, prior to the installation of the 1401, alphameric numbers[3] had to be manually assigned to each incoming CEEB report, either through the use of a master number book (known as "the bible") or by interperse[4] punching from the matching punched Lo-

3) These are sequence numbers which place students in alphabetic order, used as a time and labor saving device in most machine records operations.

4) Placing a "detail card" (the card to be numbered) behind a "master card" (the Locator Card, already numbered) and mechanically transferring the information (number) from master to detail.

cator Card. All of these steps, except filing, are now performed by the machine equipment, with the significant added benefit that all of the records thus processed are not only associated with the candidate's application folder, as before, but are also stored in a highly usable and adaptable form on magnetic tape.

All Admissions Office Locator Card punching scrupulously follows a format used by the CEEB for the punching of names. The CEEB uses, for example, full first name but only middle initial. In this way, any number of scores and records for the same student can be mechanically associated by an exact letter-by-letter comparison of the names. The arrival of a test report, as the initial item in a student's record, allows the University to take full advantage of the College Board's punching, since it mechanically establishes a complete new student record.

THE MASTER ADMISSIONS TAPE

A detailed master file of the admissions operation is developed on tape. This file is prepared from and modified by the Locator File. It also records all College Board scores received. In maintaining this tape file, not only is vital data for day-to-day processing at ready disposal, but data is accumulated which is of value in research on admissions trends and for the continuing evaluation of selection techniques.

THE PROBLEMS OF ADMISSIONS AS ASSISTED BY DATA PROCESSING

CONTROL AND ACCESSIBILITY OF DATA RECEIVED

Each day, three to five hundred pieces of admissions information are received by the Admissions Office. These consist of applications, letters of inquiry, test scores, interview records, transcripts and recommendations. The punched Locator Card File is used to record the establishment of new records and to associate new items with material previously received. The Locator cards are key-punched immediately upon the receipt of the material and before any other processing. They are added to the Locator File promptly and are always available to provide for speedy location and callup of material, perhaps in response to a telephone inquiry. The Locator File leaves the office only briefly for a weekly machine processing in the University Data Processing Division.

THE WEEKLY LISTING

Once each week, the Locator File, which might be called a "transaction file," is compared with the Master Admissions File, on tape, and the latter is up-dated (Program ADM 02). As a product of this up-dating, a multiple listing of the main data of each applicant's record in the Master File is printed, as illustrated in Figure 2.

The weekly listing gives, when available, the current status of an application — College Board scores, high school rank, proposed major, predicted average, etc. It provides each admissions officer with a desk "file" of the important data on all applicants. The listing also allows visual monitoring of the Master tape file, frequently needed in editing, and affords an invaluable information source if an application is out-of-file or otherwise not immediately locatable. Modifications of this ADM 02 listing program, using 1401 console switches, permit the creation of listings of a specialized nature, such as one of all applicants for Home Economics, or Liberal Arts, or one of all applications for readmission.

Figure 2 — Portion of Weekly Listing from a Master Admissions File

NUMBER SCH	STUDENTS NAME	STATUS	HIGHSC	CAT	RES	RANK/CLASS	IST/ADJSAT	ACH #	PRED CAST
0216297 4	ANGEVINE RICHARD	X V		P	M	60/ 63			
0216311	ANGLIN BRIAN J		220465				V581 M478		
0216325 3	ANGUS ALFRED J	X N	220575	P	M	80/ 190	V418 M604	493 3	1.7
0217003	ANKIEWICZ MITCHELL J		222025				V432 M359	2	
0220505	ANNIS JONATHAN		221555				V618 M608	1	
0220976	ANTHONY JOHN		335712					3	
0221063 3	ANTIL JOHN H	XXX N	221592	P	M	53/ 192	V451 M585	496 6	1.8
0221307	ANTLE JOHN H		10				V318 M518		
0221644 1	ANTON BARBARA J	XX N	220985	P	M	78/ 423	V600 M671	562 3	2.3
0221748	ANTON EDWARD E		221440				V402 M432		
0221860	ANTONELLI MARGARET A		221300				V359 M364	3	
0222302 1	ANTONIOTTI ALMA A	XX N		P	M	1/ 160			
0222528	ANTONITIS PETER P		221683				V419 M396	4	
0222711 1	ANTONUCCI FRANK E	X N	222485	P	M	126/ 278	V540 M641	466 3	1.5
0222828 3	ANTONUCCI ROBERT W	X N	221178	P	M	21/ 212	V439 M665	415 4	1.8
0223596 1	ANTOSIEWICZ SHIRLEY	XXX N	222005	P	M	8/ 197	V587 M629	586 3	2.5
0223757	ANTOSIEWSKI ELIZABET		221725				V497 M542		
0225670 1	APGAR GEORGE W	X N	222005	P	M	82/ 197	V723 M656	592 3	2.2
0226238	APPEL CAROL	N			M				
0226435 1	APPEL WILLIAM M	XXX N	221548	P	M	212/ 409	V577 M657	544 4	1.9
0226552 1	APPELBAUM JANICE S	X N	70939	P	O	25/ 125	V518 M473		1.9
0227204	APPLE DENA F		460377				V561 M547		
0230272 1	APRIL DAVID A	XX N	220660	P	M	67/ 197	V613 M595	514 2	1.9
0230399	APRIL JOSEPH O		221800				V470 M490	1	
0230969 1	APSIT VICTORIA	XXX N	222562	P	M	13/ 126	V513 M516		2.1
0231908 4	ARAKELIAN YERCHANIK	X X N		T	O				
0232738 9	ARBEENE GEORGEEN	X N	221365	P	M	267/ 535	V380 M364	399 3	1.2
0232875	ARBETTER MARCENY E		10				V412 M313		
0233064	ARBITER P	V	0775	-		9// -	- M608		1.9

This program, titled the "Weekly Updating of the Admissions File," establishes new records on the master tape file, matches with and corrects or adds to old records, and notifies the office when Locator Cards are missing for applicants who are registered in the tape file. The program always up-dates locator-supplied information with data from the current Locator Card. To correct other areas of the tape record, four different correction cards can be substituted for the Locator Card during a weekly processing. Using different formats (see card layouts in Appendix) these cards can variously correct Scholastic Aptitude Test scores, achievement test scores, the stored high school code number, or completely delete a faulty record.

INTEGRATION OF CEEB REPORT CARDS

College Board scores are received in large groups, following regular testing dates, and in small numbers practically every day. Scores not received on punched cards (in a letter from a guidance director, for example) are key punched in the office to CEEB format. Scores received between testing dates are generally set aside until the next big "run". During the earlier years of strictly mechanical card operations, each of the thousands of College Board scores was assigned the correct number for processing in one of two manual methods. The University Data Processing Division now uses a clever 1401 program utilizing "alphabetic logic" which performs this task automatically. (If the CEEB should decide someday to fill all columns of the report card it supplies to the colleges, leaving no space for numbering, it will certainly make the punched reports less useful. The data would have to be re-punched in order to clear some columns for alphameric numbering and the *original* document could not be machined for filing and sorting.) After the College Board scores have been numbered, they are matched against the Master Admissions File (Program ADM 01).

Under the ADM 01 Program, new file records are established, where necessary, and all pertinent data from the CEEB cards are stored in Master tape file. Up to six aptitude and twelve achievement tests can be stored in association with one student's tape record and any number of score report cards for the same student can be processed at a time.

As the College Board cards are being compared against the master tape file, the current status of the application is punched into the card as a sorting and filing device. A Locator Card is produced by the program for each College Board report which establishes a *new* student record on tape. In the Fall, before many applications have been received, substantial numbers of records are started in this way. With program features such as these, the sight of 6,000 College Board reports arriving no longer causes the weary admissions officer's heart to skip a beat. The task of processing and recording a few thousand College Board scores is reduced to a few minutes' machine time and some routine clerical filing.

TABULATION OF MATERIAL

As part of the weekly processing, an accounting of the status of all admissions material is made (Program ADM 03). This "Weekly Admissions Statistics Report" identifies freshmen, in-and out-of-state students, transfers, September or January applicants, and it breaks down the freshmen by School and College. An illustrative tabulation is shown in Figure 3. The report affords necessary control for the developing admissions process and provides valuable information to the University Schools and Colleges. It also is used in comparison with the statistics of previous years in forcasting and adjusting to broad admissions trends.

WEEKLY ADMISSIONS STATISTICS REPORT 04/01/63

SEPT APPL & ALL CBS & FOLD

FRESHMEN - IN-STATE REPORT

	CB S FOLD	APPL UNPR	ACCEP TED	PAID MATR	PAID COUN	APPL MORG	ACCL MORG	PAID MORG	COUN MORG
MALE	3201	2439	0465	0604		0264	0042	0011	
FEMALE	1896	1390	0407	0794		0130	0051	0006	
TOTAL	5097	3829	0872	1398		0394	0093	0017	

OUT OF STATE FRESHMEN

	CB S FOLD	APPL UNPR	ACCEP TED	PAID MATR	PAID COUN	APPL MORG	ACCL MORG	PAID MORG	COUN MORG
MALE	0097	0122	0018	0016		0016	0001	0002	
FEMALE	0068	0153	0029	0052		0021	0003	0001	
TOTAL	0165	0275	0047	0068		0037	0004	0003	

BREAKDOWN OF ABOVE BY SCHOOL

SCHOOL	NONE	CA&S	AGRIC	BUSAD	ENGIN	H EC	NURSE	PE	EDUC	TOTL
APPLICATN	0050	1997	0158	0454	0495	0080	0116	0224	0529	4104
ACCEPTED	0009	0630	0015	0030	0135	0010	0007	0012	0071	0919
PAID MATR	0005	0928	0029	0053	0175	0038	0041	0025	0172	1466
PAID COUN										

TRANSFERS - IN-STATE

	CB S FOLD	APPL UNPR	ACCEP TED	PAID MATR	PAID COUN	APPL MORG	ACCL MORG	PAID MORG	COUN MORG
MALE	0115	0334	0019	0002		0013			
FEMALE	0027	0167				0003			
TOTAL	0142	0501	0019	0002		0016			

OUT OF STATE TRANSFERS

	CB S FOLD	APPL UNPR	ACCEP TED	PAID MATR	PAID COUN	APPL MORG	ACCL MORG	PAID MORG	COUN MORG
MALE	0006	0050				0002			
FEMALE	0005	0048				0001			
TOTAL	0011	0098				0003			

RETURNING MEN

RETURNING WOMEN

TOTAL RECORDS 13096

NOTE - EACH STUDENT RECORD COUNTED ONLY ONCE, ACCORDING TO CURRENT STATUS, I.E. AN ACCEPTED STUDENT HAVING PAID THE $15 MATRICULATION FEE IS NOT INCLUDED IN THE COLUMN UNDER ACCEPTED BUT ONLY UNDER PAID MATR, ETC.

Until this year, this sort of tabulation (known as the "count book") was painstakingly maintained by the office supervisor using figures submitted daily by each secretary. The new procedure seems less subject to error and is a considerable time-saver.

SOLICITATION OF MISSING APPLICANT DATA

In former years, as each application was received, a report form was typed which was to be sent to the appropriate high school, in February, in order to obtain the applicant's mid-year grades. These forms were suspense-filed by high school name as they accumulated prior to mailing. When returned, these thousands of supplementary record forms had to be alphabetized, the admissions envelopes located, the forms inserted and the envelopes filed away. Since these forms could not all be made at once in February, the system contained a serious fault: the forms would be sent out for applications long since withdrawn or rejected. This discrepancy, apparently, caused the high schools to treat the forms somewhat indifferently and often the forms for active applications were not returned.

With the advent of a prediction system,[5] it was vital to obtain an up-to-date report on rank-in-class as well as the mid-year grades for each applicant. To do this, new card forms are prepared by the 1401 System only for applications still active as of February (Program ADM 07). Figure 4 shows a typical ADM 07 form prepared for distribution to High School 220143.

Figure 4 — Supplementary Secondary School Record. Additional instructions and space for recording mid-year grades are provided on reverse side.

UNIVERSITY OF MASSACHUSETTS
Supplementary Secondary School Record

This is to supplement the application previously submitted by

SALAMANDER NEWT P HS# 220143

Please verify the rank in class given at right, returning this form to The Registrar, University of Massachusetts, Amherst, Massachusetts, by March 15th.

If an accurate class rank is not available, the candidate cannot receive consideration equivalent to that given candidates for whom accurate rank is furnished. A 3-year figure based on total class and including the 1st 1/2 of grade 12 is preferred.

If not already sent, please indicate senior grades to date on the reverse side of this card.

If you wish to modify or add to your previous recommendation, please use this space:

Principal's estimate of applicant's future success:
() Little success () May encounter difficulty () Average () Above Ave

Signed _____ Title _____

School _____ Date _____

Rank in Class

Our records show the student's class rank as follows:

62 out of 264

Is this correct? Yes ☐
If not, rank should be:

_____ out of _____

These ADM 07 cards show the applicant's class rank as recorded in current files. If correct, the high school is asked merely to check an appropriate box and return. Arranging the cards for mailing to the high schools is accomplished by mechanical sorting of the high school code punched into each card. (The high school code originates with the College Board card and need not be encoded by the Admissions office,

5) See, Evaluation of Credentials, p. 15.

except in a small number of cases.) A master mailing card is merged ahead of each high school group, and the packets are ready for a window envelope. No manual preparation of the supplementary records is necessary, therefore, except mailing. Upon their return, the new rank, if appropriate, is key punched into the cards and they are matched against the Master Admission Tape file to up-date the rank-in-class recorded there (Program ADM 07). During the process of matching and up-dating, the current status of the application is punched into the supplementary record card so that it can be easily sorted for filing away.

In past years, after the admissions staff had examined every admissions folder for final processing, hundreds of applications would remain which could not be processed because of missing information. In some cases the applicant had made other plans and our inquiries would be disregarded. In many cases, often caused by factors which may not have been within the applicant's control, the missing material would finally reach the office at a time when only positions on a Waiting List remained. With the new 1401 procedures these incomplete applications can be identified *before* the Spring processing (sometimes called "the Big Sift") begins. The Master Admissions File is scanned to locate missing data (Program ADM 04).[6] A listing (See Fig. 5) of applications lacking rank-in-class information and College Board scores is made so that prior to the actual decision period the high school or the applicant can be notified that this material is outstanding. This listing also furnishes an opportunity to cross-check the accuracy of the office routine, as missing information can occasionally be discovered somewhere in the office.

Figure 5 — Pre-evaluation listing from ADM 04 Program.

APPLICATIONS WHICH ARE INCOMPLETE AND CANNOT BE PROCESSED

STUDENTS NAME	NUMBER	NO S A T	ACH ERROR	NO RANK	STATUS
AARONIAN RICHARD S	0001191	X			X
ABATE LORRAINE M	0002233	X			XX
ABBE SUSAN J	0003053	X			X
ADAMS DAVID L	0037224		ERR	X	X
ADAMS JANE M	0043856	X			X
ADAMS NANCY G	0046495			X	XXX
AFESI JOHN	0063695	X			X
AGAR SANDRA K	0064054	X			X
AGNEW JANE S	0065002			X	X

EVALUATION OF CREDENTIALS

The final decision on any application for admission is made, of course, on the basis of *all* of the admissions information on hand. Under the old systems, with different people reading different portions of the

6) ADM 04 Program also is used to adjust multiple SAT Scores and multiple Achievement Scores and to calculate converted rank in class (see p.16.)

thousands of applications, uniform, efficient, and consistent treatment was always difficult. Over the last few years, however, admissions research at the University has developed a formula which assigns weighted values to the factors in the admissions record according to their correlation with successful performance.[7] The result of this formula is a predicted average, an evaluation of the chances of successful performance at the University. This prediction formula not only quickly identifies candidates for early acceptance during the year, but it later allows the arrangement of applications in homogeneous grouping — in rough preferential order — for ultimate processing.

Predicted averages are calculated periodically following the receipt of large groups of College Board scores. A preliminary program (Program ADM 04) calculates "adjusted" scores for multiple College Board scores, using CEEB recommendations (See appendix, 1, p.19). The ADM 04 program equates rank positions in high schools with various sized classes by converting them to inverted percentile ranks on a standard score scale (See appendix 1, p.20).

Using this converted data, Program ADM 05 calculates the predicted averages and creates two products: (1) A data label for the admissions folder of any unprocessed and newly predicted applicant (See Fig. 6), and (2) a matching punched card containing basic information, including the newly calculated predicted average. These work cards are sorted and listed according to the admissions demands of the period.

Figure 6 — Prediction Label for Admissions Envelope

Candidate presents adjusted SAT scores of V593 M613, composite adjusted achievement score of 526, Class rank of 62 out of class of 355 (rank of 59 on standard score scale), student number of 3270341, and desires to major in Engineering (Code #4). His predicted average is 2.1 — better than 90% chance of successful performance at the University.

SALAMANDER NEWT P 2.1
V593 M613 ACH 526 CR 59
62/ 355 3270341 4

During the year, generally, only folders of applicants with a 90% predicted chance of succeeding in the freshman year are pulled and examined for possible early admission. During "Big Sift" in the Spring, however, the program is modified to produce cards for *all* of the unprocessed applications remaining in the files. These cards are then machined to produce lists which are used in the selection of folders for intensive evaluation on a homogeneous grouping basis. The card lists make it possible not only to examine folders by predicted average but also, for example, all foreign applicants at one time, post-graduates, or even if desired, all of the applicants from a particular high school.

7) An Office of Institutional Studies Report covering this research is in process.

PREPARATION FOR ENROLLMENT PROCESSING

The storage of admissions data in a Master Tape File allows for the production of a wide variety of output items of great necessity to an Admissions Office during the transition period between a student's acceptance and enrollment. A short program produces labels of vital statistics for attachment to scholarship applications prior to their consideration by the Scholorship Committee while a slight modification of the Prediction Program creates labels with the admissions information which must be posted on the Student Permanent Record Card.

In May, the Locator Cards for accepted students are sorted out and the addresses which have been previously typed on their faces are key punched. The records of these students, taken from the Master Admissions Tape, are combined with the encoded addresses to produce a Temporary Statistical File similar to the active file of enrolled students. Stock IBM Programs can prepare from this file the address labels used for Summer Counseling billings and summer organizational mailings, as well as the multiple copy pre-enrollment listings used by University departments in preparing for the admission of a new class.

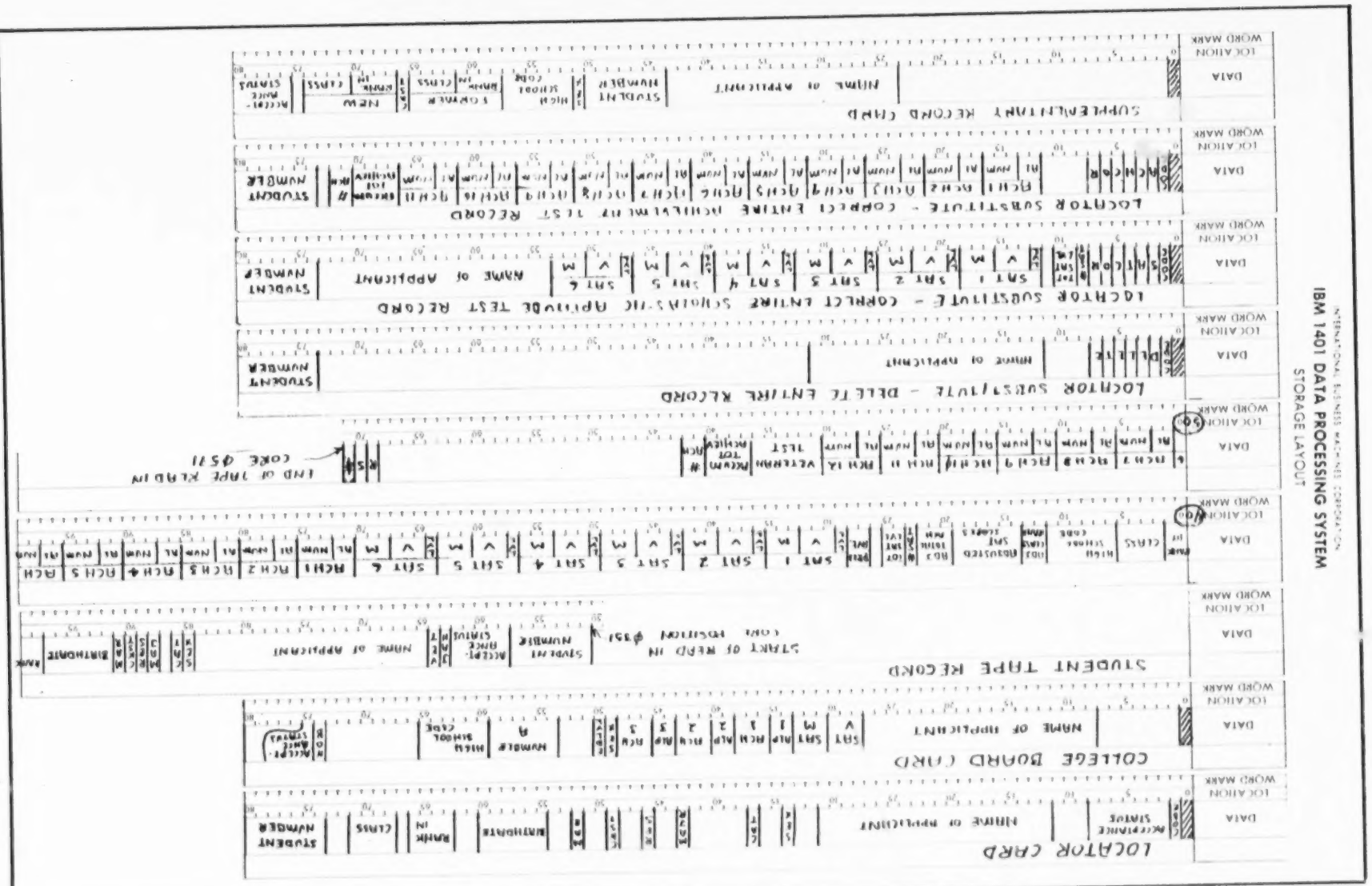
ADMISSIONS PREDICTION SYSTEM

An admissions *prediction* system in the magnitude here discussed could not conceivably have been made operable without electronic data processing. Even without this goal of a computed predicted average, however, the other outputs of the operating procedure are significant. Having at finger tips, for example, a summary record of each piece of admissions information received is an extremely useful feature of the system, especially during the weeks of the Spring deliberation when pressures are great. Although the clerical time of processing an incoming document is not substantially reduced over "pre-mechanization" days, time spent in filing subsequent documents, making supplementary record forms, preparing mailings, maintaining status counts, and in all forms of admissions research is substantially reduced or virtually eliminated. In addition, many phases of the machine handling provide for cross-checking, self-correcting records, and continual editing, all working to produce more accurate enrollment records. The electronic data processing approach seems the logical answer to a volume admissions operation

It is hoped that institutions contemplating the conversion to electronic data processing in admissions will find the experience at the University of Massachusetts of value. Crucial to the successful utilization of such a processing system are an extensive system analysis and a careful procedure design. It is strongly felt that, because of the complexity of the admissions process, detailed technical preparation is desirable for the Admissions staff member who is developing such a system, including training in programming techniques.

The basic package of seven admissions programs has been written with the symbolic addressing so arranged that the changing of appropriate card and tape layout definitions[8] at the beginning of each program make it usable in another installation. Perhaps this can provide a framework for the establishment of other 1401 admissions systems. There is no comfortable status quo in the admissions field today. Rapid institutional expansion and changes in the number and quality of applicants both work to produce a climate in which efficient admissions processing and careful research are extremely vital. An Electronic Data Processing System can materially assist in these challenging tasks.

8) Layout definition occurs at the beginning of a program and defines where in the particular card or tape design items of material are located.


LOCATOR CARD
COLLEGE BOARD CARD
STUDENT TAPE RECORD
LOCATOR SUBSTITUTE - CORRECT ENTIRE ACHIEVEMENT TEST RECORD
LOCATOR SUBSTITUTE - CORRECT ENTIRE SCHOLASTIC APTITUDE TEST RECORD
LOCATOR SUBSTITUTE - DELETE ENTIRE RECORD
IND of TAPE READING CORE @511
DATA
LOCATION WORD MARK

ADJUSTING MULTIPLE SAT SCORES

Adaptation of the CEEB recommendations for calculating a single "adjusted" Scholastic Aptitude Test Score from multiple reports used in Program ADM 04. The program capitalizes on the fact that the accumulated total of the code for the level at which the test was taken (2 = junior in high school, 3 = senior) provides a single number which identifies each possible combination of junior and senior test reports for appropriate processing. (Note Col. 3)

Tests Re'cd	# of Tests	Total Level	Adjustment Equation
1 Jr.	1	2	Score used as is
1 Sr.	1	3	Score used as is
2 Jr.	2	4	$\frac{\text{Jr. SAT} + \text{Jr. SAT}}{2}$
1 Jr. 1 Sr.	2	5	$\frac{\text{Jr. SAT} + 2(\text{Sr. SAT})}{3}$
2 Sr.	2	6	$\frac{\text{Sr. SAT} + \text{Sr. SAT}}{2} - 5$
2 Jr. 1 Sr.	3	7	Drop 1st Jr., $\frac{\text{2nd Jr. SAT} + 2(\text{Sr. SAT})}{3} - 10$
1 Jr. 2 Sr.	3	8	Drop Jr., $\frac{\text{Sr. SAT} + \text{Sr. SAT}}{2} - 10$
3 Sr.	3	9	$\frac{\text{Sr. SAT} + \text{Sr. SAT} + \text{Sr. SAT}}{3} - 10$
2 Jr. 2 Sr.	4	10	Drop Both Jrs., $\frac{\text{Sr. SAT} + \text{Sr. SAT}}{2} - 10$
1 Jr. 3 Sr.	4	11	Drop Jr., $\frac{\text{Sr. SAT} + \text{Sr. SAT} + \text{Sr. SAT}}{3} - 10$
2 Jr. 3 Sr.	5	13	Drop Both Jrs., $\frac{\text{Sr. SAT} + \text{Sr. SAT} + \text{Sr. SAT}}{3} - 10$

ADJUSTING MULTIPLE ACHIEVEMENT TEST SCORES

In order to provide one single measurement for up to twelve achievement test reports, an average score is calculated by dividing the accumulated achievement tests scores by the number of test reports.

CALCULATING CONVERTED RANK IN CLASS

College Board reports are reported on a standard score scale. In order to include the class rank and the College Boards in one prediction equation and to provide an adjustment for various sized classes, an inverted percentile rank is converted to a standard score scale.

$$\frac{\text{Rank in Class} - .5}{\text{Size of class}} = \text{Inverted Percentile Rank}$$

Inverted Percentile Rank is converted to a scale having a mean of 50 and a standard deviation of 10.

Fractional ranks, such as "second quarter", are calculated at the bottom of the class segment stipulated. 2nd ¼ of 100 would, therefore, be calculated as 50/100.

```
CT  LABEL    OP     A OPERAND       B OPERAND       D        LOC   INSTRUCTION COMMENTS    ADR01
             CTL    33
             ONS    0003
                    *
                    *****WEEKLY UPDATING OF THE ADMISSIONS FILE*****        PROGRAM # 1
                    *
                    *  THIS PROGRAM TRANSFERS ONTO TAPE THE COLLLCT-
                    *ED AND UPDATED INFORMATION ON EACH APPLICANT
                    *WHICH IS RECORDED IN THE PUNCHED LOCATOR CARD
                    *FILE. A MULTIPLE-PART LISTING OF BASIC INFOR-
                    *MATION CONTAINED IN EACH RECORD CAN BE MADE
                    *WITH THE FOLLOWING MODIFICATIONS-
                    *    SWITCH B- LISTS ALL RECORDS IN FILE
                    *    SWITCH C- AGRICULTURE APPLICATIONS ONLY
                    *    SWITCH D- HOME ECONOMICS APPLICATIONS ONLY
                    *    SWITCH E- RETURNING STUDENTS ONLY
                    *    SWITCH F- LISTS ALL RECORDS WITHOUT READING
                    *              CARDS OR WRITING ANY TAPE
                    *    SWITCH G- USED TO PREVENT UPDATING OF TAPE
                    *              CLASS RANK FROM POSSIBLY INCORRECT
                    *              LOCATOR CARDS AFTER SUPPLEMENTARY
                    *              RECORD CARDS HAVE CHANGED TAPE
                    *              RANKS WITHOUT THE REMARKING OF LOCA-
                    *              TOR RECORDS
                    *RECORDS ARE SELF-CORRECTING. TAPE RECORD IS
                    *CORRECTED TO WHATEVER IS IN LOCATOR CARD
                    *
                    *  TO CORRECT OTHER AREAS OF TAPE RECORD, FOUR
                    *SUBSTITUTE LOCATOR FORMATS CAN BE USED. IDENTI-
                    *FIED IN COLS 2-7 AS FOLLOWS-
                    *    SATCOR- DELETES ALL SAT RECORDS AND REPLACES
                    *    ACHCOR- DELETES ALL ACHIEVMENT TEST RECORDS
                    *            AND REPLACES BY CORRECT ONES
                    *    MISCOR- CORRECTS WRONG HIGH SCHOOL CODING
                    *    DELETE- COMPLETELY REMOVES FAULTY RECORD
                    *
                    *              INSTRUCTIONS
                    *
                    *LAST CARD- DUMMY W/ WORD LAST IN COLS 56-57
                    *LOCATOR FILE, NUMBERED AND SEQUENCE CHECKED.
                    * DUPLICATES REMOVED. FED IN HEAD SIDE
                    *BLANK LOCATORS IN PUNCH SIDE
                    *PRINTS IN COLS 212-305
                    *
                    *
                    *DEFINE SYMBOLS ON LOCATOR CARD
                    *
  5  STATUS   DS      0006                                          0006
 20  NAME     DS      0031                                          0031
  1  SEX      DS      0036                                          0036
  1  CATEGY   DS      0037                                          0037
  1  MAJCOD   DS      0043                                          0043
  1  RELSCHL  DS      0045                                          0045
  1  CHRSTP   DS      0047                                          0047
  1  MARITL   DS      0052                                          0052
  6  BIRTH    DS      0060                                          0060
  4  RANKIN   DS      0064                                          0064
  6  CLASS    DS      0071                                          0071
  9  LOC NO   DS      0080                                          0080
                    *
                    *DEFINE SYMBOLS ON TAPE RECORD
                    *
  7  TAPENO   DC*     0357                                          0357
  5  TSTATS   DC*     0362                                          0362
 20  TNAME    DC*     0384                                          0384
  1  TSEX     DC*     0385                                          0385
  1  TCATGY   DC*     0386                                          0386
  1  TMAJOR   DC*     0388                                          0388
  1  TRELIG   DC*     0389                                          0389
  1  TCHSTP   DC*     0390                                          0390
  1  TMRLIT   DC*     0391                                          0391
  6  TBIRTH   DC*     0397                                          0397
  4  TRANK    DC*     0401                                          0401
  6  TCLASS   DC*     0405                                          0405
  6  TSCHL    DC*     0411                                          0411
  2  ADJRNK   DC*     0413                                          0413
  3  A-SATV   DC*     0416                                          0416
  3  A-SATM   DC*     0419                                          0419
  3  ADJACH   DC*     0422                                          0422
  1  TOTSAT   DC*     0423                                          0423
  2  TOTSCL   DC*     0425                                          0425
  2  PREDAV   DC*     0428                                          0428
  3  SATV     DC*     0432                                          0432
  3  SATM     DC*     0435                                          0435
  6  ACCACH   DC*     0560                                          0560
  2  TOTACH   DC*     0562                                          0562
  1  ACHRMK   DC*     0563                                          0563
  1  SATIST   DS      0429                                          0429
  1  ACHIST   DS      0671                                          0671
                    *
                    *HEADINGS USED IN LISTING
                    *
 32                 DC*      *      NUMBER SEX    STUDENTS AND,    0336
 32                 DC       *      STATUS  MISMBC CAT HES MRK/CLAS  0368
 41  LISTHD   DC    *       S IST/ADJUST  RC= #   PAGE ZRST          0397
                    *
                    *CONSTANTS USED BY THE PROGRAM
                    *
  6  LAST     DC*     *                                    LAST     0001
  2  POINT    DC*     *                                    .        0006
  1  RCDMRK   DC*     *                                    0        0008
  6  DELETE   DC*     *                                 DELETE      0009
  6  SATCOR   DC*     *                                 SATCOR      0015
  6  ACHCOR   DC*     *                                 ACHCOR      0021
  6  MISCOR   DC*     *                                 MISCOR      0027
  1  SLASH    DC*     *                                    /        0033
  1  ADJMRK   DC*     *                                             0034
  2  TWOMRK   DC*     *                                             0035
  1  0        DC*     *                                    0        0036
  1  1        DC*     *                                    1        0037
  1  2        DC*     *                                    2        0038
  1  3        DC*     *                                    3        0039
  1  4        DC*     *                                    4        0040
  1  TWO      DC*     *                                    2        0041
  1  FIVE     DC*     *                                    5        0042
  1  SIX      DC*     *                                    6        0043
```

```
CT  LABEL    OP     A OPERAND        B OPERAND        D        LOC   INSTRUCTION COMMENTS    ADM01
 2  ATETWO   DC*    *                                  82     0943
 2  ACCI     DC*    *                                        0945
 3  CMNGAD   DSA    *                TOLIST            V45    0948
 1  ASTHIK   DC*    *                                  *     0949
 1  MRKRCD   DC*    0802                               *     0802
                    *
                    *TAPE LABEL ROUTINE-  NO TAPE *RITTEN ON %U2 IF
                    *F S*ITCH IS ON
                    *
 7  BEGIN    LCA    *GRPMK           0291                    0350  L  L23 291
 8           MC*    %U1              0211             H      0357  M  %U1 211  H  READ RTAPE LABLL
 1                  *                                       0965  2               PRINT RTAPE LABL
 5           B      FS*ITC                            F     0966  B  #05  F       SKIP *RITL IF F
 8           MC*    %U2              0211             H      0971  M  %U2 211  R  READ *TAPE LABEL
 1                  *                                       0979  2               PRINT *TAPE LABL
 5           CU     %U2                               B     0980  U  %U2  B       BACKSPACE *TAPE
 1                  R                                       0984  1               READ HEADER CARD
 7           MCM    0001             0211                   0986  P  001 211      MOVE TO PRINT
 1                  *                                       0993  2               PRINT HEADER CD
 2           CC                                       1     0994  F  1            ADJUST PAPER
 1                  H                                       0996  .               HALT & OBSERVE
 8           MC*    %U2              0211             *     0997  M  %U2 211  *  LABEL TAPE *TAPE
 4  FS*ITC   CS     0299                                    1005  /  299           CLEAR PRINT AREA
                    *
                    *SET LOCATOR CARD *ORD MARKS
                    *
 7           S*     STATUS-004       NAME  -019             1007  .  002 012
 7           S*     SEX              CATEGY                 1016  .  036 037
 7           S*     MAJOR            HLSCNC                 1023  .  043 046
 7           S*     CHRSTP           MARITL                 1030  .  047 052
 7           S*     BIRTH -005       RANKIN-003             1037  .  055 063
 7           S*     CLASS -003       LOC NO-006             1044  .  068 074
                    *
                    *MOVE HEADING FOR ADMISSIONS HUSTLR
                    *
 2           CC                                       1     1051  F  1            ADJUST PAPER
 7           MC*    LISTHD           0306                   1053  M  897 306      MOVE HEADING TO
 1                  *                                       1060  2                 PRINT & PRINT
 2           CC                                       2     1061  F  2            SPACE
 8           CS     0306                                    1063  /  306          CLEAR PRINT
 4           CS     0299                                    1067  /  299            STORAGE AREA
                    *
                    *ALTLR PROGRAM TO SKIP CARD-TAPL COMPARISON IF
                    *F S*ITCH ON. THIS PROVIDES TAPE-TO-PRINT LISTNG
                    *
 5           B      NOCOMP                            F     1071  B  #80  F
 6           B      READI                                   1076  U  /17           SKIP IF F NOT ON
 7  NOCOMP   MC*    B                NOPI                   1080  M  936  /24
 7           MC*    CMNGAD           NOPI  6003             1087  M  94M  /27
 7           MC*    %                TP*RIT                 1094  M  935  Z65      NO-OP INSTRUCTNS
 7           MC*    %                OUT                    1101  M  935  Z66        HAVING TO DO
 7           MC*    %                OUT2  6004             1108  M  935  Z54        *ITH TAPE*RITL
 6           B      TPRLAD                                  1115  B  /20
                    *
                    *READ CARD AND TAPE RECORDS,CHECKING FOR MATCH
                    *AND BRANCHING TO APPROPRIATL PROCESSING ROUTINL
                    *
 1  READI    R                                              1117  1               READ A CARD
 6  TPRLAD   B      MTAPE                                   1120  U  -07           READ TAPE RECORD
 6  NOPI     NOP    LOTAPE                                  1124  *  *66           USED AFTR LASTCD
 7           C      LOC NO           TAPENO                 1126  C  080  357     COMPARL NUMBLRS
 5           B      LOTAPL                            T     1135  B  *66  T       TAPL-NO CARD/ODD
 5           B      LOCARD                            U     1140  B  *73  U       CARD-NO TAPL/*LS*
                    *
                    *ROUTINE FOR UPDATING TAPE RECORD *HLN CARD AND
                    *TAPL HAVE SAME NUMBLR
                    *
 7  SAMENO   C      DELETC           0007                   1145  C  981  007     IF A DELETE CARD
 5           B      ERASE                             S     1152  U  586  S         SKIP TO LRASL
 7           C      SATCO*           0007                   1157  C  917  007     IF SAT CO**PCTN
 5           B      CONSAT                            S     1164  B  /37  S         DO THAT FIRST
 7           C      ACHCO*           0007                   1169  C  923  007     IF ACH CO**LCTN
 5           B      COACH                             S     1176  U  536  S         DO THAT FIRST
 7           C      HISCO*           0007                   1181  C  929  007     IF H S CO**LCTN
 5           B      CONHIS                            S     1188  U  575  S         DO THAT FIRST
 6           B      INSERT                                  1193  B  722           IF REGULR LOCATN
                    *
                    *CORRECTING AN IMPROPERLY STORED SAT SCORE *ITH
                    *APPROPRIATL CARD SUBSTITUTED FOR LOCATION
                    *
 7  CONSAT   MC*    SCORE*           0056                   1197  M  80%  056
 7           MC*    0112             SATEST                 1206  P  012  429
 7           MC*    0010             TOTLVL                 1211  M  010  425
 7           MC*    0008             TOTSAT                 1216  M  008  423
 7           MC*    ASLAVK           0056                   1225  M  931  056
 6           B      %ATCD                                   1232  U  *2%
                    *
                    *CORRECTING IMPROPERLY STORED ACHIEVEMENT SCORES
                    *WITH APPROPRIATL CARD SUBSTITUTED FOR LOCATLN
                    *
 7  COACH    MC*    SCORE*           0067                   1236  M  80%  067
 7           MC*    0112             ACHIST                 1241  P  012  471
 7           MC*    ASLAVK           0067                   1250  M  931  067
 7           MC*    0071             ACCACH                 1257  M  071  340
 7           MC*    0073             TOTACH                 1264  M  073  343
 6           B      %ATCD                                   1271  B  *2*
                    *
                    *CORRECTING CODING OF HIGH SCHOOL
                    *
 7  CONHIS   MC*    0017             TSCHL                  1275  M  017  411
 6           B      %ATLD                                   1282  B  *6%
                    *
                    *DELETING A RLCORD FROM TAPL
                    *
 7  ERASE    C      %AML             TNAME                  1286  C  041  384     DOUBLL CHLCK
 5           B      %ATLD                             /     1293  B  *2%  /       NAME- SKIP IF
 1                  *                                       1298  1                 NOT SAME
 7           C      LAST             0057                   1299  C  981  057     IF NEXT CARD NOT
 5           B      TPRLAD                            /     1306  B  /20  /         LAST, RLAD NXT
 7           MC*    B                NOPI                   1311  M  936  /24       RECORD, LOOKING
 6           B      TPRLAD                                  1318  B  /20            DELETE RECORD
                    *
                    *UPDATL TAPL RLCORD FROM MATCHING LOCATOR CARD
```

```
CT  LABEL   OP    A OPERAND        B OPERAND        D       LOC   INSTRUCTION COMMENTS    ADM01
                  *
 8  INSERT  B     NORANK           TCLASS                   1322  B T35 405   SKIP CLS/TCLASS
 5          B     BIRTHD                            G      1330  B U06 G      BLANK OR SW G
 8  NORANK  B     BIRTHD           CLASS                    1335  B U06 071   SKIP/NO LOC CLS
 7          C     TCLASS           CLASS                    1343  C 405 071   IF CLS,IS SAME
 5          B     RANK                              S      1350  B T59 S     IF SAME,TRY RANK
 4          B     REPLAC                                   1355  B T71       IF NOT,REPLACE
 7  RANK    C     TRANK            RANKIN                   1359  C 401 066   SAME RNK IN BOTH
 5          B     BIRTHD                            S      1366  B U06 S     IF SO, SKIP
 7  REPLAC  MCW   TBLANK           ADJRNK                   1371  M 933 413   IF RANK CHANGES,
 7          MCW   TBLANK           PREDAV                   1378  M 933 428     CLEAR AREAS SO
 7          MCW   ABLANK           RDYMRK                   1385  M 931 569     WILL REPREDICT
 7          MCW   CLASS            TCLASS                   1392  M 071 405   MOVE CLASS SIZE
 7          MCW   RANKIN           TRANK                    1399  M 066 401   MOVE CLASS RANK
 8  BIRTHD  B     MARTL            BIRTH                    1406  B U21 060   SKIP IF NO BIRTH
 7          MCW   BIRTH            TBIRTH                   1414  M 060 397   MOVE BIRTHDATE
 8  MARTL   B     CKSTOP           MARITL                   1421  B U36 052   SKIP IF NO MARTL
 7          MCW   MARITL           TMARIT                   1429  M 052 391   MOVE MARITAL
 8  CKSTOP  B     RESID            CHKSTP                   1436  B U51 049   SKIP IF NO CKSTP
 7          MCW   CHKSTP           TCKSTP                   1444  M 049 390   MOVE CHECKSTOP
 8  RESID   B     MAJR             RESDNC                   1451  B U66 046   SKIP IF NO RESID
 7          MCW   RESDNC           TRESID                   1459  M 046 389   MOVE RESIDENCE
 8  MAJR    B     APPCAT           MAJOR                    1466  B U81 043   SKIP IF NO MAJOR
 7          MCW   MAJOR            TMAJOR                   1474  M 043 388   MOVE MAJOR
 8  APPCAT  B     SEXY             CATEGY                   1481  B U96 037   SKIP IF NO CATGY
 7          MCW   CATEGY           TCATGY                   1489  M 037 386   MOVE APPN CATEGY
 8  SEXY    B     HANDLE           SEX                      1496  B V11 034   SKIP IF NO SEX
 7          MCW   SEX              TSEX                     1504  M 034 385   MOVE SEX
 7  HANDLE  MCW   NAME             TNAME                    1511  M 031 384   MOVE NAME
 7          MCW   STATUS&002       TSTATS&002               1518  M 008 364   UPDATE STATUS
                  *
                  *CHECK TO SEE NEXT CARD IS NOT LAST CARD BEFORE
                  *PROCESSING
                  *
 1  NXTCD   R                                              1525  1
 7          C     LAST             0057                     1526  C 901 057
 5          B     TOLIST                                   1533  B V45 /
 7          MCW   B                NOP1                     1538  M 934 /24
                  *
                  *DEPENDING ON SWITCH SETTING, THIS ROUTINE PRO-
                  *DUCES DIFFERENT LISTINGS
                  *
 5  TOLIST  B     LISTIT                            B      1545  B W10 B     LISTS ALL APPLNS
 5          B     AGRIC                             C      1550  B V74 C     LISTS AGRIC APPN
 5          B     HOMEEC                            D      1555  B V86 D     LISTS HOME EC
 5          B     CHKRET                            E      1560  B V98 E     LISTS RETURNINGS
 5          B     LISTIT                            F      1565  B W10 F     LISTS ALL/NO CDS
 4          B     TPWRIT                                   1570  B Y65
 8  AGRIC   B     LISTIT           0388             2      1574  B W10 388 2
 4          B     TPWRIT                                   1582  B Y65
 8  HOMEEC  B     LISTIT           0388             5      1586  B W10 388 5
 4          B     TPWRIT                                   1594  B Y65
 8  CHKRET  B     LISTIT           0386             R      1598  B W10 386 R
 4          B     TPWRIT                                   1606  B Y65
                  *
                  *SUBROUTINE TO PRINT LISTING
                  *
 7  LISTIT  MCW   TAPENO           0218                     1610  M 357 218   STUDENT NUMBER
 7          MCW   TMAJOR           0220                     1617  M 388 220   MAJOR SCHOOL
 7          MCW   TNAME            0242                     1624  M 384 242   NAME
 7          MCW   TSTATS&002       0250                     1631  M 364 250   STATUS OF RECORD
 7          MCS   TSCHL            0257                     1638  Z 411 257   HIGH SCHOOL #
 7          MCW   TCATGY           0260                     1645  M 386 260   CATEGORY OF APPN
 7          MCW   TRESID           0264                     1652  M 389 264   RESIDENCY
 8          B     NORNK            TCLASS                   1659  B W88 405   SKIP/NO CLS RANK
 7          MCW   SLASH            0271                     1667  M 930 271   SLASH
 7          MCS   TRANK            0270                     1674  Z 401 270   RANK IN CLASS
 7          MCS   TCLASS           0275                     1681  Z 405 275   SIZE OF CLASS
 8  NORNK   B     NOASAT           SATM                     1688  B X46 435   SKIP/NO SATS
 7          MCW   V                0279                     1696  M 937 279   V
 7          MCW   SATV             0282                     1703  M 432 282   VERBAL SAT
 7          MCW   M                0284                     1710  M 938 284   M
 7          MCW   SATM             0287                     1717  M 435 287   MATH SAT
 8          B     NOASAT           A-SATV                   1724  B X46 416   SKIP/NO ADJ SAT
 7          MCW   A-SATV           0282                     1732  M 416 282   ADJUSTED SAT V
 7          MCW   A-SATM           0287                     1739  M 419 287   ADJUSTED SAT M
 8  NOASAT  B     NOAACH           ADJACH                   1746  B X61 422   SKIP/NO ADJ ACH
 7          MCW   ADJACH           0292                     1754  M 422 292   ADJUSTED ACHIEV
 7  NOAACH  MCS   TOTACH           0294                     1761  Z 542 294   TOTAL # ACH TEST
 7          MCW   ASTRIK           0296                     1768  M 949 296   ASTRISK
 8          B     NOPRED           PREDAV                   1775  B X97 428   SKIP/NO PRED AVE
 7          LCA   POINT            0301                     1783  L 904 301   DECIMAL POINT
 7          MCE   PREDAV           0301                     1790  E 428 301   PREDICTED AVERGE
 7  NOPRED  MCW   TCKSTP           0304                     1797  M 390 304   CHECK STOP
 1  NOASAT  W                                              1804  2           PRINT
 4          CS    0299                                     1805  / 299       CLEAR PRINT
 4          CS    0306                                     1809  / 306         AREAS
                  *
                  *ADD TO PAGE-LINE COUNTER
                  *
 7          A     RONE             ACC1                     1813  A Z90 945   ADD 1 TO COUNTER
 7          C     ACC1             ATETWO                   1820  C 945 943   IF 82 LINES DONE
 5          B     ENDPG                             S      1827  B Y36 S       START NEW PG
 4          B     TPWRIT                                   1832  B Y65       OTHERWISE SKIP
                  *
                  *START NEW PAGE ROUTINE
                  *
 2  ENDPG   CC                                       L      1836  F L         SPACE TO START
 2          CC                                       J      1838  F J           NEW PAGE
 7          MCW   LISTHD           0306                     1840  M 897 306   TITLE TOP OF PG
 1          W                                               1847  2           PRINT
 2          CC                                       J      1848  F J         SPACE
 4          CS    0299                                     1850  / 299       CLEAR PRINT
 4          CS    0306                                     1854  / 306         AREAS
 7          MCW   TBLANK           ACC1                     1858  M 933 945   RESET COUNTER
                  *
 4  TPWRIT  B     WTAPE                                    1865  B L78       WRITE A RECORD
 4          B     TPREAD                                   1869  B /20       SKIP TO READ
                  *
                  *ADJUSTMENT ROUTINE FOR ADDING NEW CARD RECORD
                  *TO TAPE
                  *
 5  LOCARD  CU    BU1                               B      1873  U BU1 B     BACKSPACE TAPE
 7          MCW   RSTOP &010       RSTART                   1878  P 881 351   CLEAR TAPE READ
 7          MCW   LOC NO           TAPENO                   1885  M 080 357   MOVE STUDENT NO
 4          B     INSERT                                   1892  B T22
```

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CT  LABEL   OP    A OPERAND        B OPERAND        D      LOC   INSTRUCTION COMMENTS    ADM01
                  *
                  *A TEMPORARY LOCATOR CARD IS MADE FOR ANY TAPE
                  *RECORD WITHOUT MATCHING LOCATOR CARD IN FILE.
                  *THOSE REPRESENTING APPLICATIONS RECEIVED ARE
                  *POCKETED OUT FOR FURTHER INVESTIGATION
                  *
 7  LOTAPE  MC*   TAPENO           0180                    1896  M 357 180   NUMBER
 7          MC*   TNAME            0131                  1903  M 384 131   NAME
 7          MC*   TSTATS&002       0108                  1910  M 364 108   STATUS OF RECORD
 7          MC*   SIX              0101                  1917  M 241 101   CARD CODE
 7          MC*   SIX              0358            X     1924  A 237 358 X SKIP IF APPLICTN
 8          B     SRTOUT                                 1932  4           NORMAL POCKETED
 1          P                                            1933  8 V45       PROCEED TO LIST
 4          B     TOLIST                                 1937  4           IF APPLICATION
 1  SRTOUT  P                                      4     1938  K 4           SORT IN 4 PKT
 2          SS                                           1940  8 V45       PROCEED TO LIST
 4          B     TOLIST
                  *
                  *END OF JOB
                  *
 2  FINJOB  CC                                     1     1944  F 1
 4  OUT     B     *UNLD1                                 1946  6 M25       UNLOAD WRITE TP
 4  OUT2    B     *FINAL                                 1950  U K36       PRINT READ ERRS
 4          B     *FINAL                                 1954  8 N61       PRINT WRITE ERRS
                  *
                  *
     RTAPE        *READ TAPE SUBROUTINE INCLUDING CONSTANTS AND      OMITTED TO SAVE SPACE
                  *TAPE ERROR TOTAL COUNT PRINTING.
                  *
     *TAPE        *WRITE TAPE SUBROUTINE INCLUDING CONSTANTS AND     OMITTED TO SAVE SPACE
                  *TAPE ERROR TOTAL COUNT PRINTING.
                  *
             END  BEGIN                                                / 950 080
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```
CT  LABEL   OP    A OPERAND        B OPERAND        D      LOC   INSTRUCTION COMMENTS    ADM02
             CTL  33
             ORG  0803
                  *                                                          PROGRAM # 2
                  ********PROCESSING COLLEGE BOARD SCORES*********
                  *
                  *   THIS PROGRAM ASSOCIATES UP TO SIX APTITUDE
                  *AND TWELVE INDIVIDUAL ACHIEVEMENT TEST REPORTS
                  *WITH THE STUDENT ADMISSIONS TAPE RECORD, MAIN-
                  *TAINING AS WELL APPROPRIATE ACCUMULATORS AND
                  *TOTALS NECESSARY FOR THE SUBSEQUENT PROCESSING
                  *OF SUCH REPORTS.
                  *   MULTIPLE CARDS CAN BE PROCESSED. WHEN A SCORE
                  *FOR A NEW STUDENT IS RECEIVED, A LOCATOR CARD
                  *IS PRODUCED. COLLEGE BOARD CARDS ARE PUNCHED
                  *WITH CURRENT STATUS OF APLICATION FOR EASE IN
                  *FILING
                  *
                  *                INSTRUCTIONS
                  *
                  *NUMBERED COLLEGE BOARDS PUT IN PUNCH SIDE
                  *LAST CARD IS DUMMY W/ WORD LAST IN COLS 54-57
                  *AT HALT1, REENTER CARDS ON READ SIDE AND PUT
                  *   BLANK LOCATORS IN PUNCH SIDE.
                  *COLLEGE BOARDS W/ GRADE LEVEL NOT 2 OR 3 ARE
                  *   POCKETED OUT AND NOT PROCESSED
                  *
                  *
                  *DEFINE SYMBOLS ON COLLEGE BOARD CARD
                  *
                   0027                                                0027
20  NAME    DS     0027                                                0030
 3  SAT V   DS     0030                                                0033
 3  SAT M   DS     0033                                                0035
 2  ALPH 1  DS     0035                                                0038
 3  ACH 1   DS     0038                                                0040
 2  ALPH 2  DS     0040                                                0043
 3  ACH 2   DS     0043                                                0045
 2  ALPH 3  DS     0045                                                0048
 3  ACH 3   DS     0048                                                0049
 1  SEX     DS     0049                                                0050
 1  ED LVL  DS     0050                                                0059
 6  NO A    DS     0059                                                0065
 6  SCHOOL  DS     0065                                                0074
 1  NO B    DS     0074                                                0075
 1  CSTATS  DS     0075
                  *
                  *DEFINE SYMBOLS ON TAPE RECORD
                  *
                   0357                                                0357
 7  TAPENO  DCW    0357                                                0364
 7  TSTATS  DCW    0364                                                0384
20  TNAME   DCW    0384                                                0385
 1  TSEX    DCW    0385                                                0386
 1  TCATGY  DCW    0386                                                0411
 6  TSCHL   DCW    0411                                                0419
 6  ADJSAT  DCW    0419                                                0422
 3  ADJACH  DCW    0422                                                0423
 1  TOTSAT  DCW    0423                                                0425
 2  TOTLVL  DCW    0425                                                0428
 2  PREDAV  DCW    0428                                                0435
 6  SATONE  DCW    0435                                                0475
 5  ACHONE  DCW    0475                                                0540
 4  ACCACH  DCW    0540                                                0542
 2  TOTACH  DCW    0542                                                0569
 1  RDYMRK  DCW    0569
                  *
                  *DEFINE ADDRESSES FOR LOCATOR CARD PUNCHING
                  *
 1  CDCODE  DS     0101                                                0101
20  L-NAME  DS     0131                                                0131
 1  L-SEX   DS     0134                                                0134
 1  STATUS  DS     0175                                                0175
 7  LOCNO   DS     0180                                                0180
                  *
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CT  LABEL    OP     A OPERAND          B OPERAND          D        LOC   INSTRUCTION COMMENTS    ADM02
                   *CONSTANTS USED BY THE PROGRAM
                   *
 3  INDEX1   DCW    0089                                          0089
 3  INDEX2   DCW    0094                                          0094
 1  ACCUM1   DCW    *                                             0803
 2  ACCUM2   DCW    *                                             0812
 7  NUMBER   DCW    *                                             0818
 6  BLANK    DCW    *                                             0819
 1  GRPMRK   DCW    *                                         1   0820
 1  ONE      DCW    *                                         5   0821
 1  FIVE     DCW    *                                         6   0822
 1  SIX      DCW    *                                         7   0823
 1  SEVEN    DCW    *                                        11   0825
 2  ELEVEN   DCW    *                                        15   0827
 2  FIFTEN   DCW    *                                         8   0828
 1  B        DCW    *                                         X   0829
 1  X        DCW    *                                         0   0830
 1  ZERO     DCW    *                                    LAST     0834
 4  LAST     DCW    *                                     191     0837
                   *
                   *TAPE LABEL ROUTINE
                   *
 7  BEGIN    LCA    GRPMRK             0291                       0838  L 819 291
 8           MCW    %U2                0211           R           0845  M %U2 211 R  READ #TAPE LABEL
 1           W                                                    0853  2            PRINT #TAPE LABL
 5           CU     %U2                                    B      0854  U %U2 B      BACKSPACE #TAPE
 8           MCW    %U1                0211           R           0859  M %U1 211 R  READ RTAPE LABEL
 1           W                                                    0867  2            PRINT RTAPE LABL
 1           R                                                    0868  1            READ HEADER CARD
 7           MCM    0001               0211                       0869  P 001 211    HEADER TO PRINT
 1           S                                                    0876  2            PRINT HLADER CD
 2           CC                                            1      0877  F 1          ADJUST PAPER
 1           H                                                    0879  .            HALT & OBSERVE
 8           MCW    %U2                0211           #          0880  M %U2 211 #  #RITE #TAPE LABL
 4           CS     0299                                         0888  / 299        CLEAR PRINT AREA
                   *
                   *SET COLLEGE BOARD WORD MARKS
                   *
 7           SW     NAME  -019         SAT V -002                 0892  . 008 028
 7           SW     SAT M -002         ALPH 1-001                 0899  . 031 034
 7           SW     ACH 1 -002         ALPH 2-001                 0906  . 036 039
 7           SW     ACH 2 -002         ALPH 3-001                 0913  . 041 044
 7           SW     ACH 3 -002         SEX                        0920  . 046 049
 7           SW     ED LVL             NO A  -005                 0927  . 050 054
 7           SW     SCHOOL-005         NO B                       0934  . 060 074
 4           SW     STATUS                                        0941  . 175
                   *
                   *FIRST CARD READ, TAPE READS, AND COMPARISON OF
                   *CARD AND TAPE RECORDS
                   *
 2           P                                             R      0945  4 R          READ FIRST CARD
 7           MCW    NO A               NUMBER-001                 0947  M 059 811    MOVE PART OF NO
 7           MCW    NO B               NUMBER                     0954  M 07[illegible] 812  MOVE REST OF NO
                                                                  0961  B #29        READ TAPE RECORD
 4  TAPERD   B      RTAPE                                         0965  N #37        EVTL B LAST CARD
 4  NOP1     NOP    LOTAPE                                        0969  C 812 357    COMPARE NUMJERS
 7  COMPAR   C      NUMBER             TAPENO                     0976  B #37 T      BRANCH/ TAPE LOW
 5           B      LOTAPE                                   T     0981  B #45 S      BRANCH/ SAME NOS
 5           B      SAMENO                                   S
                   *
                   *PROCESSING A NEW STUDENTS RECORD AND INSERTING
                   *IT ON TAPE
                   *
 5           CU     %U1                                      B     0986  U %U1 B      BACKSPACE TAPE
 7           MCM    RSTOP &010         RSTART                     0991  P 581 351    CLEAR TAPE READ
 7           MCW    BLANK              INDEX1                     0998  M 818 089
 7           MCW    NUMBER             TAPENO                     1005  M 812 357
 7           MCW    NAME               TNAME                      1012  M 027 384
 7           MCW    SEX                TSEX                       1019  M 049 3[illegible]
 7           MCW    SCHOOL             TSCHL                      1026  M 065 411
                   *
                   *HAVING ESTABLISHED A TAPE RECORD, PROCESS AS A
                   *MATCHING CARD
                   *
 4           B      SAMENO                                        1033  B #45
                   *
                   *PROCESSING A LOW TAPE RECORD OR COMPLETING A
                   *NEW TAPE RECORD
                   *
 4  LOTAPE   B      WTAPE                                         1037  B Z98        WRITE TAPE
 4           B      TAPERD                                        1041  B 961        BRANCH TO READ
                   *
                   *PROCESSING A TAPE RECORD AND ONE OR MORE MATCH-
                   *ING COLLEGE BOARD CARDS
                   *
 7  SAMENO   MCW    BLANK              ACCUM1                     1045  M 818 803    CLEAR COUNTER
 8           B      CHKACH             SAT V                      1052  B /55 030    SKIP/ NO SATS
                   *
                   *DETERMINING HOW MANY SATS ON TAPE TO INSERT THE
                   *NEW ONES IN APPROPRIATE PLACE - SKIP WHEN 6 AL-
                   *READY STORED
                   *
 7  USEIT    MCW    BLANK              INDEX1                     1060  M 818 089    CLEAR INDEXING
 8           B      CHKACH             TOTSAT         6           1067  B /55 423 6  SKIP/ 6 SATS
 7           MCW    BLANK              ADJSAT                     1075  M 818 419    CLEAR ADJUSTED
 7           MCW    BLANK              PREDAV                     1082  M 818 428      SAT,PREDICTED
 7           MCW    BLANK              RDYMRK                     1089  M 818 569      AVE,& READYMRK
 7  TEST 1   C      ACCUM1             TOTSAT                     1096  C 803 423    WHEN CNTR MATCH-
 5           B      INSERT                                   S     1103  B /26 S        ES TOTAL-INSRT
 7           A      ONE                ACCUM1                     1108  A 820 803    ADD TO COUNTER
 7           A      SEVEN              INDEX1                     1115  A 823 089    ADD TO INDEXING
 4           B      TEST 1                                        1122  B #96        TRY AGAIN
                   *
                   *STORING SAT SCORES ON TAPE
                   *
 7  INSERT   MCW    SAT M              SATONE         1           1126  M 033 475    MOVE MATH SCORE
 4           MCW    SAT V                                        1133  M 030          VERBAL SCORE
 4           MCW    ED LVL                                       1137  M 050          EDUC LEVEL
 7           A      ONE                TOTSAT                    1141  A 820 423    ADD TO TOTAL SAT
 7           A      ED LVL             TOTLVL                    1148  A 050 425    ADD TO ACCUM LVL
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CT  LABEL    OP    A OPERAND          B OPERAND          D      LOC   INSTRUCTION COMMENTS    ADM02
                   *
                   *DETERMINE ONE AT A TIME IF ACHIEV ON CARD IN
                   *SPACE AS MODIFIED AND LOCATE FIRST AND SUBSE-
                   *QUENT AVAILABLE STORAGE LOCATIONS ON TAPE
                   *SKIP WHEN TWELVE ACHIEVMENTS STORED
                   *
 7  CHKACH   MCW   BLANK              INDEX1                    1155  M 818 089   CLEAR INDEXING
 7           MCW   BLANK              INDEX2                    1162  M 818 094
 7           MCW   BLANK              ACCUM2                    1169  M 818 805   CLEAR COUNTER
 8  ACHCHK   B     FIN CD             ACH 1      2              1176  B 581 0L8   SKIP/ END OF ACH
 7           C     ELEVEN             TOTACH                    1184  C 825 542     OR 12 STORED
 5           B     FIN CD                              U       1191  B 581 U       ALREADY
 7           MCW   BLANK              ADJACH                    1196  M 818 422   CLEAR ADJ ACHIEV
 7  TEST 2   C     ACCUM2             TOTACH                    1203  C 805 542   DETERMINE HOW
 5           B     PUT IN                              S       1210  B 533 S       MANY ACH NOW
 7           A     ONE                ACCUM2                    1215  A 820 805     STORED AND MOD
 7           A     FIVE               INDEX1                    1222  A 821 089     IFY STORAGE AD
 4           B     TEST 2                                       1229  B 503         DRES SAME TIME
 7  PUT IN   MCW   ACH 1      2       ACHONE     1              1233  M 0L8 4X5   STORE ACH SCORE
 4           MCW   ALPH 1     2                                 1240  M 0L5       ALPHABETICAL ACH
 7           A     ONE                TOTACH                    1244  A 820 542   ADD TO # OF ACH
 7           A     ACH 1      2       ACCACH                    1251  A 0L8 540   ADD TO ACCUM ACH
 7           A     FIVE               INDEX2                    1258  A 821 094   ADJUST INDEXING
 7           C     INDEX2             FIFTEN                    1265  C 094 827   SKIP/ DONE 3 ACH
 7           B     FIN CD                              S       1272  B 581 S
 5           B     ACHCHK                                       1277  B /76       PROCESS NEXT ACH
 4
                   *
                   *STORE HIGH SCHOOL CODE IF NONE STORED- IF A
                   *SENIOR CB CARD OR A PG UPDATE ANY STORED CODE
                   *
 8  FIN CD   B     UPSCHL             ED LVL     3              1281  B T01 050 3 USE/ SENIOR
 8           B     UPSCHL             TSCHL                     1289  B T01 411   USE/ NONE YET
 4           B     UPDATE                                       1297  B T08       NO CHANGE SCHLNO
 7  UPSCHL   MCW   SCHOOL             TSCHL                     1301  M 065 411   MOVE SCHOOL CODE
                   *
                   *DETERMINE ACCEPTANCE STATUS AND PUNCH INTO CB
                   *CARD FOR SORTING AND FILING
                   *
 7  UPDATE   MCW   COMP1              INDEX1                    1308  M 837 089   SET INDX MINUS 1
 7           ZA    SIX                ACCUM1                    1315  & 822 803   SET ACCUM AT 6
 7  STATIS   S     ONE                ACCUM1                    1322  S 820 803   SUBTR 1 FROM ACC
 8           B     UPSTAT             TSTATS-001 1       X      1329  B T56 3W3 X PUNCH-STATS MTCH
 7           A     COMP1              INDEX1                    1337  A 837 089   SUBTR 1 FRM INDX
 8           B     UPSTAT             ACCUM1             &      1344  B T56 803 & SKIP/ ACC ZERO
 4           B     STATIS                                       1352  B T22       CHECK NXT LOWEST
 7  UPSTAT   MN    ACCUM1             STATUS                    1356  D 803 175   PUNCH STATUS IN
                   *
                   *TEST FOR ANOTHER CARD FOR SAME STUDENT BEFORE
                   *WRITING TAPE
                   *
 2  PUNCH    P                                       R          1363  4 R         PUNCHT/READ NEXT
 7           MCW   BLANK              STATUS                    1365  M 818 175   CLEAR PUNCH AREA
 7  LASTCK   C     LAST               0057                      1372  C 834 057   LAST CARD CHECK
 5           B     LASTCD                              S       1379  B U22 S       IF SO, BRANCH
 8           B     PROCES             ED LVL     2              1384  B U04 050 2 USE, JR SCORE
 8           B     PROCES             ED LVL     3              1392  B U04 050 3 USE, SR SCORE
 4           B     CANTPR                                       1400  B U33       SKIP IF NOT
 7  PROCES   MCW   NO A               NUMBER-001                1404  M 059 811   MOVE PART OF NO
 7           MCW   NO B               NUMBER                    1411  M 074 812   MOVE REST OF NO
 4           B     NOP1                                         1418  B 965       BRANCH TO COMPAR
                   *
 7  LASTCD   MCW   B                  NOP1                      1422  M 828 965   PREVENT FURTHER
 4           B     LOTAPE                                       1429  B #37         READ COMMANDS
                   *
 2  CANTPR   P                                       R          1433  4 R           CANT PROCESS-
 2           SS                                    4          1435  K 4             PUNCH/POCKED/
 4           B     LASTCK                                       1437  B T72           READ NEXT CARD
                   *
                   *END OF FIRST HALF OF JOB
                   *
 4  FINJOB   B     OUT                                          1441  B U45       AFTER RTAPE UNLD
 4  OUT      B     WUNLD1                                       1445  B -45       UNLOAD WTAPE
 4  OUT2     B     RFINAL                                       1449  B Y56       PRINT READ ERROR
 4           B     WFINAL                                       1453  B J81       PRINT WRITE ERR
 4  HALT1    H     LOCJOB                                       1457  . U61       HALT
                   *
                   *MAKE LOCATOR CARDS FOR THOSE COLLEGE BOARD
                   *CARDS FOR WHICH NO PREVIOUS INFORMATION WAS
                   *RECORDED
                   *THE CARDS IN THIS GROUP ARE PUNCHED EARLIER
                   *WITH AN & IN COL 75
                   *MAKES ONLY ONE LOCATOR FOR MULTIPLE CB CARDS
                   *FOR SAME STUDENT
                   *
 1  LOCJOB   R                                           1461  1             READ A CARD
 7  NEWSTU   C     0057               LAST                      1462  C 057 834   IF LAST CARD,
 5           B     ENDJOB                              S       1469  B V70 S       SKIP TO END
 8           B     MAKECD             CSTATS          0       1474  B U87 075 0 CHECH NEW STATUS
 8           B     LOCJOB                             /       1482  B U61 /     SKIP IF NOT
 7  MAKECD   MCW   NO A               LOCNO -001                1487  M 059 179   MOVE PART OF NO
 7           MCW   NO B               LOCNO                     1494  M 074 180   MOVE REST OF NO
 7           MCW   NAME               L-NAME                    1501  M 027 131   NAME
 7           MCW   SIX                CDCODE                    1508  M 822 101   CARD CODE
 7           MCW   SEX                L-SEX                     1515  M 049 134   SEX
 7           NCW   R                                           1522  1           READ NEXT CARD
 1  NOSAME   R                                           1523  C 057 834   IF LAST CARD
 7           C     0057               LAST                      1530  B T63 S       SKIP TO PUNCH
 5           B     PUNCH                               S       1535  M 059 811   RESERVE PART NO
 7           MCW   NO A               NUMBER-001                1542  M 074 812   REST OF NO
 7           MCW   NO B               NUMBER                    1549  C 180 812   IF SAME AS PRE-
 7           C     LOCNO                                        1556  B V22 S       VIOUS READ NXT
 5           B     NOSAME                              S       1561  4           NOT/ PUNCH LOC
 1  PUNCH    P                                           1562  / 180       CLEAR PUNCH AREA
 4           CS    0180                                         1566  B 986       PROCESS NXT CARD
 4           B     NEWSTU                                       1574  . V74
 4  HALT2    H     HALT2
                   *
     RTAPE         *READ TAPE SUBROUTINE INCLUDING CONSTANTS AND        OMITTED TO SAVE SPACE
                   *TAPE ERROR TOTAL COUNT PRINTING.
                   *
     WTAPE         *WRITE TAPE SUBROUTINE INCLUDING CONSTANTS AND       OMITTED TO SAVE SPACE
                   *TAPE ERROR TOTAL COUNT PRINTING.
                   *
               END   BEGIN                                        / 838 080
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```
CT  LABEL    OP     A OPERAND        B OPERAND        D        LOC   INSTRUCTION COMMENTS    ADM03
                    CTL    33
                    ORG    0600
                   *
                   ***WEEKLY TABULATION OF ADMISSIONS STATISTICS***          PROGRAM # 3
                   *
                   *THIS JOB IS RUN EACH WEEK FOLLOWING THE UP-
                   * DATING OF THE ADMISSIONS FILE
                   *    WITH B SWITCH ON- A TABULATION OF SEPTEMBER
                   *       APPLICANTS IS MADE
                   *    WITH NO SWITCHES- A TABULATION OF JANUARY
                   *       APPLICATIONS. THIS MEANS RUNNING THE JOB
                   *       TWICE DURING THE FALL SEASON
                   *
                   *                  INSTRUCTIONS
                   *
                   *HEADER CARD SHOULD CONTAIN DATE IN COLS 1-8
                   * AS XX/XX/XX.
                   *PRINTS IN 211- 287 - ADMISSIONS TAPE IS READ
                   * ON SU1
                   *
                   *
                   *LOCATION OF ITEMS OF STUDENT RECORD USED IN THE
                   * TABULATION
                   *
  5  STATUS   DS     0362                                          0362
  1  ENTDTE   DS     0363                                          0363
  1  SEX      DS     0385                                          0385
  1  CATEGY   DS     0386                                          0386
  1  MAJOR    DC*    0388                                          0388
  1  RESUNC   DS     0389                                          0389
                   *
                   *DEFINITION OF 5-COL APPLICATION STATUS
                   *
  5  NOAPPN   DC*     *                                           0604
  5  APPLYD   DC*     *                                    X      0609
  5  ACCPTD   DC*     *                                   XX      0614
  5  ISPAID   DC*     *                                  XXX      0619
  5  PDCOUN   DC*     *                                 XXXX      0624
  5  APPMRG   DC*     *                                 X   X     0629
  5  ACCMRG   DC*     *                                 XX  X     0634
  5  PDMORG   DC*     *                                 XXX X     0639
  5  CNSMRG   DC*     *                                 XXXXX     0644
                   *
                   *CONSTANTS USED IN PROGRAM
                   *
  7  BLANK7   DC*     *                                           0651
  1  ABLANK   DC*     *                                           0652
  3  BLANKS   DC*     *                                           0655
  1  ONE      DC*     *                                     1     0656
  1  FIVE     DC*     *                                     5     0657
  1  SIX      DC*     *                                     6     0658
  2  FORTYO   DC*     *                                    42     0660
  3  ONE80    DC*     *                                   180     0663
  3  THRE60   DC*     *                                   360     0666
  1  B        DC*     *                                     B     0667
  1  N        DC*     *                                     N     0668
  1  *GRPMK   DC*     *                                           0669
  1  RCDMRK   DC*     *                                     *     0670
  2  ACCUM1   DC*     *                                           0672
  2  ACCUM2   DC*     *                                           0674
  2  ACCUM3   DC*     *                                           0676
  3  INDEX1   DC*     0089                                        0089
  3  INDEX2   DC*     0094                                        0094
  3  INDEX3   DC*     0099                                        0099
                   *
                   *HEADINGS USED IN TABULATION PRINTING
                   *
 32           DCW     *      WEEKLY ADMISSIONS STATISTICS HEP     0708
  3  TOPHD    DC      *                                  ORT     0711
 26  SEPTHD   DCW     *            SEPT APPL & ALL CBS & FOLD     0737
 13  JANHD    DCW     *                       JAN APPL ONLY       0750
 26  INHEAD   DCW     *            FRESHMEN - IN-STATE REPORT     0776
 21  OSHEAD   DCW     *                 OUT OF STATE FRESHMEN     0797
 20  TRHEAD   DCW     *                  TRANSFERS - IN-STATE     0817
 22  OSTRHD   DCW     *               OUT OF STATE TRANSFERS      0839
 28  SCHLHD   DCW     *          BREAKDOWN OF ABOVE BY SCHOOL     0867
 32           DCW     *      CB S  APPL  ACCEP PAID  PAID  AP     0899
 20  LINE1    DC      *            PE  ACCE  PAID  COUN            0919
 32           DCW     *      FOLD  UNPR  TED   MATR  COUN  MO     0951
 20  LINE2    DC      *            RG  MORG  MORG  MORG            0971
 32           DCW     *      SCHOOL      NONE  CA&S  AGRIC B     1003
 32           DC      *      USAD ENGIN H EC  NURSE  PE   EDU     1035
  7  LINE3    DC      *                              C  TOTL     1042
 19  FEMRET   DCW     *                RETURNING WOMEN             1061
 19  MANRET   DCW     *                RETURNING MEN               1080
 13  TOTREC   DCW     *                      TOTAL RECORDS         1093
 32           DCW     *      NOTE - EACH STUDENT RECORD COUNT     1125
 32           DC      *      ED ONLY ONCE, ACCORDING TO CURRE     1157
  2  LINE4    DC      *                                 NT        1159
 32           DCW     *      STATUS, I.E. AN ACCEPTED STUDENT     1191
 31  LINE5    DC      *        HAVING PAID THE $15 MATRICULA-     1222
 32           DCW     *      TION FEE IS NOT INCLUDED IN THE      1254
 30  LINE6    DC      *        COLUMN UNDER ACCEPTED BUT ONLY     1284
 21  LINE7    DCW     *                UNDER PAID MATR. ETC.      1305
                   *
                   *STORAGE LOCATIONS FOR COUNTING
                   *
 32           DCW     *      MALE                                 1337
 28  IN/FR1   DC      *                                           1365
 32           DCW     *      FEMALE                               1397
 28  IN/FR2   DC      *                                           1425
 32           DCW     *      TOTAL                                1457
 28  IN/FR3   DC      *                                           1485
 32           DCW     *      MALE                                 1517
 28  OS/FR1   DC      *                                           1545
 32           DCW     *      FEMALE                               1577
 28  OS/FR2   DC      *                                           1605
 32           DCW     *      TOTAL                                1637
 28  OS/FR3   DC      *                                           1665
 32           DCW     *      MALE                                 1697
 28  IN/TR1   DC      *                                           1725
 32           DCW     *      FEMALE                               1757
 28  IN/TR2   DC      *                                           1785
```

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CT  LABEL    OP    A OPERAND        B OPERAND        D      LOC   INSTRUCTION COMMENTS    ADM03
32           DCW   *      TOTAL                             1817
28  IN/TR3   DC    *                                        1845
32           DCW   *      MALE                              1877
28  OS/TR1   DC    *                                        1905
32           DCW   *      FEMALE                            1937
28  OS/TR2   DC    *                                        1965
32           DCW   *      TOTAL                             1997
28  OS/TR3   DC    *                                        2025
 1  SETMKS   DCW   *                                        2026
32           DCW   *      APPLICATN                         2058
46  CNTAPP   DS    *                                        2104
32           DCW   *      ACCEPTED                          2136
46  CNTACC   DS    *                                        2182
32           DCW   *      PAID MATR                         2214
46  CNTPD    DS    *                                        2260
32           DCW   *      PAID COUN                         2292
46  CNTCNS   DS    *                                        2338
                   *
                   *ADDRESSES OF FIRST STORAGE LOCATIONS EACH LINE
                   *
 3  ADRAPP   DSA   *              CNTAPP-061 3       -03   2341
 3  ADRACC   DSA   *              CNTACC-061 3       JB1   2344
 3  ADRPD    DSA   *              CNTPD -061 3       JI9   2347
 3  ADRCOU   DSA   *              CNTCNS-061 3       KG7   2350
 3  APPTOT   DSA   *              CNTAPP-001         J03   2353
 3  ACCTOT   DSA   *              CNTACC-001         JB1   2356
 3  PDTOT    DSA   *              CNTPD -001         K59   2359
 3  COUTOT   DSA   *              CNTCNS-001         L37   2362
                   *
                   *READ LABEL OF ADMISSIONS TAPE
                   *
 7  BEGIN    LCA   *GRPMK         0291                     2363  L 669 291
 8           MCW   %U1            0211             R       2370  M %U1 211 R
 1           W                                             2378  2
 4           CS    0299                                    2379  / 299
 2           CC                                    1       2383  F 1
 1           H                                             2385  *
                   *
                   *SET WORD MARKS IN COUNTING-STORAGE AREAS
                   *
 7           SW    FEMRET-002     MANRET-002               2386  * $59 $78
 4  SETWMS   SW    SETMKS6014 1                            2393  * -U0          SET WORDMARKS IN
 7           A     SIX            INDEX1                   2397  A 658 089      AREA FOR BREAK
 8           B     ENDSET         INDEX1-002        3      2404  B M16 087 3    DOWN BY SCHOOL
 4           B     SETWMS                                  2412  B L93          /OTHER WMS SET
 1  ENDSET   NOP                                           2416  N              AS ADDRS MADE/
                   *
                   *READ TAPE RECORD AND DETERMINE WHETHER SEPT OR
                   *JAN ADMISSION
                   *
 4  TPREAD   B     RTAPE                                   2417  B E13
 5           B     SEPT                              B     2421  B M38 B
 8  JAN      B     COUNT          ENTDTE             J     2426  B M46 363 J
 4           B     TPRLAD                                  2434  B M17
 8  SEPT     B     TPREAD         ENTDTE             J     2438  B M17 363 J
                   *
                   *DETERMINE STATUS OF APPLICATION
                   *
 7  COUNT    MCW   BLANKS         INDEX1                   2446  M 655 089      CLEAR INDEXES &
 7           MCW   BLANKS         INDEX2                   2453  M 655 094        ACCUMULATOR
 7           MCW   BLANKS         INDEX3                   2460  M 655 099
 7           MCW   BLANKS         ACCUM1                   2467  M 655 672
 8           B     OUTSTA         RESDNC             O     2474  B N02 389 O OUT/STATE APPL
 8  TRANCK   B     TRANSF         CATEGY             T     2482  B N13 386 T TRANSFER APPL
 8           B     RETURN         CATLGY             R     2490  B N24 386 R RE-ENTERING APPL
 4           B     SCHLCK                                  2498  B N34
                   *
                   *ADJUST TENTATIVE STORAGE LOCATION ACCORDING TO
                   *APPLICATION CATEGORY
                   *
 7  OUTSTA   A     ONE80          INDEX2                   2502  A 663 094      UP LOCTN 1ST POS
 4           B     TRANCK                                  2509  B M82            BY 180 IF O.S.
 7  TRANSF   A     THRE60         INDEX2                   2513  A 666 094      UP LOCTN 1ST POS
 4           B     REGCNT                                  2520  B P22            BY 360 IF TRNS
 8  RLTURN   B     MALERT         SEX                1     2524  B N43 385 1 IF RE-ENTERING,
 7           A     ONE            FEMRET                   2532  A 656 $61      ADD 1 TO FEML
 4           B     TPREAD                                  2539  B M17            OR
 7  MALERT   A     ONE            MANRET                   2543  A 656 $80      1 TO MALE AND
 4           B     TPREAD                                  2550  B M17          SKIP TO NEXT
                   *
                   *DETERMINE APPLICATION STATUS FOR FRESHMAN
                   *BREAKDOWN BY SCHOOL
                   *
 7  SCHLCK   C     STATUS         APPLYD                   2554  C 362 609      IS ONLY APPL RCD
 5           B     SCHLS2                          /       2561  B N84 /        SKIP- NOT ABOVE
 7           MCW   ADRAPP         STORE16006               2566  M L41 P14      SET FOR APP LINE
 7           MCW   APPTOT         STORE26006               2573  M L93 P21        AND APP TOTL
 4           B     MATCH                                   2580  B 070
 7  SCHLS2   C     STATUS         ACCPTD                   2584  C 362 614      IS ACCPTD APPLN
 5           B     SCHLS3                          /       2591  B 014 /        SKIP- NOT ABOVE
 7           MCW   ADRACC         STORE16006               2596  M L44 P14      SET FOR ACC LINE
 7           MCW   ACCTOT         STORE26006               2603  M L96 P21        AND ACC TOTL
 4           B     MATCH                                   2610  B 070
 7  SCHLS3   C     STATUS         ISPAID                   2614  C 362 619      IS PAID MATR
 5           B     SCHLS4                          /       2621  B 044 /        SKIP- NOT ABOVE
 7           MCW   ADRPD          STORE16006               2626  M L47 P14      SET FOR PAIDMATR
 7           MCW   PDTOT          STORE26006               2633  M L99 P21        AND PAID TOTL
 4           B     MATCH                                   2640  B 070
 7  SCHLS4   C     STATUS         PDCOUN                   2644  C 362 624      IS ACC/COUNS PD
 5           B     REGCNT                          /       2651  B P22 /        SKIP- MORGUED AP
 7           MCW   ADRCOU         STORE16006               2656  M L50 P14        AND COUN TOTL
 7           MCW   COUTOT         STORE26006               2663  M L02 P21
                   *
                   *DETERMINE MAJOR FOR SCHOOL BREAKDOWN
                   *
 7  MATCH    C     ACCUM1         MAJOR                    2670  C 672 388      CHECK MAJOR
 5           D     STORE1                          S       2677  B P08 S        BRANCH WHEN MTCH
 7           A     ONE            ACCUM1                   2682  A 656 672      TRY NEXT HIGHER
 7           A     SIX            INDEX3                   2689  A 658 099      ADJUST STORAGE
 8           B     REGCNT         ACCUM1-001         1     2696  B P22 671 1 SKIP IF 9 TRIED
 4           B     MATCH                                   2704  B 070
                   *
                   *ADD TO THE APPROPRIATE SCHOOL COUNTS
                   *
 7  STORE1   A     ONE            0000               3     2708  A 656 060      ADD TO SCHL CNT
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CT  LABEL    OP    A OPERAND          B OPERAND          D       LOC    INSTRUCTION COMMENTS    ADM03
 7  STORE2   A     ONE                0000                       2715   A 656 000   ADD TO TOTAL
                  *
                  *DETERMINE STATUS FOR COUNT OF APPLICATION
                  *CLASSIFICATION
                  *
 7  REGCNT   C     STATUS             NOAPPN     1               2722   C 362 614   COMPARE STATUS
 5           B     ADD-IT                              S         2729   U P00 S       OF RECORD SUC-
 7           A     FIVE               INDEX1                     2734   A 657 089     CESSIVELY WITH
 7           A     SIX                INDEX2                     2741   A 658 094     CONSTANTS,ADJ-
 8           B     STSERR             INDEX1-001         3       2748   U 009 068 5   USTING COUNT
 4           B     REGCNT                                        2756   B P22         LOCATN APPROPR
                  *
                  *ADD TO APPROPRIATE STATUS-CLASSIFICATION COUNTS
                  *
 4  ADD-IT   S*    IN/FR3-052 2                                  2760   . UL3
 7           A     ONE                IN/FR3-049 2               2764   A 656 UL6   ADD TO TOTAL CNT
 8           B     MALE               SEX                1       2771   B P94 385 1
 4  FEMALE   S*    IN/FR2-052 2                                  2779   . TP3
 7           A     ONE                IN/FR2-049 2               2783   A 656 TP6   ADD TO FEM COUNT
 4           B     TPREAD                                        2790   B M17
 4  MALE     S*    IN/FR1-052 2                                  2794   . TJ3
 7           A     ONE                IN/FR1-049 2               2798   A 656 TJ6   ADD TO MEN COUNT
 4           B     TPREAD                                        2805   B M17
                  *
                  *IF THE STATUS WAS INCORRECTLY PUNCHED AN ERROR
                  *CARD IS PRODUCED TO ELICIT A CORRECTION
                  *
 4  STSERR   CW    MAJOR                                         2809   B 388       CLEAR WM IST 80-
 7           MCW   RSTART6079         0180                       2813   M 430 180   MOVE TO PUNCH
 4           S*    MAJOR                                         2820   . 388       RESET WM
 1           P                                                   2824   4           PUNCH ERROR CARD
 4           B     TPREAD                                        2825   B M17       READ NEXT RECORD
                  *
 4  OUT      B     RFINAL                                        2829   B G46       PRNT READ ERRORS
 1           R                                                   2833   1           READ DATE HEADER
 4           SW    0001                                          2834   . 001
                  *
                  *REPORT IS PRINTED FOUR TIMES BEFORE JOB END
                  *
 7  PRINT    MCW   BLANKS             ACCUM3                     2838   M 655 676
 7           MCW   BLANKS             INDEX1                     2845   M 655 089
 7           MCW   BLANKS             INDEX2                     2852   M 655 094
 4           CS    0299                                          2859   / 299
 2           CC                                        1         2863   F 1
 7           MCW   TOPHD             0250                       2865   M 711 250   MOVE REPORT TITL
 7           MCW   0009               0260                       2872   M 009 260   MOVE REPORT DATE
 1           W                                                   2879   2
 2           CC                                        J         2880   F J
 4           CS    0260                                          2882   / 260
 5           B     SEPTHT                              B         2886   B R02 B
 7           MCW   JANHD              0243                       2891   M 750 243   MOVE JAN HEADING
 4           B     HDWRIT                                        2898   B R09
 7  SEPTRT   MCW   SEPTHD             0247                       2902   M 737 249   MOVE SEPT HEADNG
 1  HDWRIT   W                                                   2909   2
 2           CC                                        J         2910   F J
 7           MCW   INHEAD             0249                       2912   M 776 249   IN-STATE HEADING
 1           W                                                   2919   2
 2           CC                                        J         2920   F J
 7  RELIST   MCW   LINE1              0269                       2922   M 919 269   PRINT HEADINGS
 1           W                                                   2929   2             FOR STATUS
 7           MCW   LINE2              0269                       2930   M 971 269     COLUMNS
 1           W                                                   2937   2
 2           CC                                        J         2938   F J
 7           MCW   RCDMRK             IN/FR1             1       2940   M 670 T#5
 7           MCM   LINE7 6001 1       0211                       2947   P T#6 211   MOVE MALE COUNTS
 7           MCW   ABLANK             0270                       2954   M 652 270
 1           W                                                   2961   2
 2           CC                                        J         2962   F J
 7           MCW   RCDMRK             IN/FR2             1       2964   M 670 U55
 7           MCM   IN/FR16001 1       0211                       2971   P T#6 211   MOVE FEMALE CNTS
 7           MCW   ABLANK             0270                       2978   M 652 270
 1           W                                                   2985   2
 2           CC                                        J         2986   F J
 7           MCW   RCDMRK             IN/FR3             1       2988   M 670 UY5
 7           MCM   IN/FR26001 1       0211                       2995   P U56 211   MOVE TOTAL CNTS
 7           MCW   ABLANK             0270                       3002   M 652 270
 1           W                                                   3009   2
 4           CS    0299                                          3010   / 299
 2           CC                                        L         3014   F L
 7           MCW   OSHEAD      2      0246                       3016   M 7R7 246   OUT-STATE HEAD
 1           W                                                   3023   2
 2           CC                                        J         3024   F J
 7           MCW   LINE1              0269                       3026   M 919 269   HEADINGS FOR
 1           W                                                   3033   2             STATUS COLUMNS
 7           MCW   LINE2              0269                       3034   M 971 269
 1           W                                                   3041   2
 2           CC                                        J         3042   F J
 7           MCW   RCDMRK             OS/FR1             1       3044   M 670 VU5
 7           MCM   IN/FR36001 1       0211                       3051   P UY6 211   MALE COUNTS
 7           MCW   ABLANK             0270                       3058   M 652 270
 1           W                                                   3065   2
 2           CC                                        J         3066   F J
 7           MCW   RCDMRK             OS/FR2             1       3068   M 670 W#5
 7           MCM   OS/FR16001 1       0211                       3075   P VU6 211   FEMALE COUNTS
 7           MCW   ABLANK             0270                       3082   M 652 270
 1           W                                                   3089   2
 2           CC                                        J         3090   F J
 7           MCW   RCDMRK             OS/FR3             1       3092   M 670 WW5
 7           MCM   OS/FR26001 1       0211                       3099   P W#6 211   TOTAL COUNTS
 7           MCW   ABLANK             0270                       3106   M 652 270
 1           W                                                   3113   2
 4           CS    0299                                          3114   / 299
 2           CC                                        L         3118   F L
 4  NOP2     NOP   ENDLST                                       3120   N C39
 7           MCW   SCHLHD             0250                       3124   M 867 250   SCHLBRKDN HEAD
 1           W                                                   3131   2
 2           CC                                        J         3132   F J
 7           MCW   LINE3              0281                       3134   M #42 281   SCHOOL HEADINGS
 1           W                                                   3141   2
 2           CC                                        J         3142   F J
 7           MCW   RCDMRK             CNTAPP                     3144   M 670 J04
 7           MCM   SETMKS6001         0211                       3151   P -27 211   COUNT OF APPLNS
 7           MCM   0277               0271                       3158   P 277 271
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CT  LABEL    OP     A OPERAND          B OPERAND          D      LOC   INSTRUCTION COMMENTS     ADM03
4            CW     0288                                         3165  W 288
4            CW     0282                                         3169  W 282
7            MCW    BLANK7             0288                      3173  M 651 288
1            W                                                   3180  2
2            CC                                          J       3181  F  J
7            MCW    RCDMRK             CNTACC                    3183  M 670 J82
7            MCM    CNTAPP&001         0211                      3190  P J05 211      COUNT OF ACCEPTD
7            MCM    0277               0271                      3197  P 277 271
4            CW     0288                                         3204  W 288
4            CW     0282                                         3208  W 282
7            MCW    BLANK7             0288                      3212  M 651 288
1            W                                                   3219  2
2            CC                                          J       3220  F  J
7            MCW    RCDMRK             CNTPD                     3222  M 670 K60
7            MCM    CNTACC&001         0211                      3229  P J83 211      COUNT OF PD MATR
7            MCM    0277               0271                      3236  P 277 271
4            CW     0288                                         3243  W 288
4            CW     0282                                         3247  W 282
7            MCW    BLANK7             0288                      3251  M 651 288
1            W                                                   3258  2
2            CC                                          J       3259  F  J
7            MCW    RCDMRK             CNTCNS                    3261  M 670 L38
7            MCM    CNTPD &001         0211                      3268  P K61 211      COUNT OF PD COUN
7            MCM    0277               0271                      3275  P 277 271
4            CW     0288                                         3282  W 288
4            CW     0282                                         3286  W 282
7            MCW    BLANK7             0288                      3290  M 651 289
1            W                                                   3297  2
4            CS     0299                                         3298  / 299
2            CC                                          L       3302  F  L
7            MCW    TRHEAD             0245                      3304  M 817 245      TRANSFER HEADING
1            W                                                   3311  2
2            CC                                          J       3312  F  J
7            MCW    B                  NOP2                      3314  M 667 A20      CHANGE LOOP & IN
7            MCW    THRL60             INDEX1                    3321  M 666 089        DEXLS SO PRINT
7            MCW    FORTWO             INDEX2                    3328  M 660 094        START PRINTS
4            B      RELIST                                       3335  B W22            TRANSFER CNTS
                    *
4  ENDLST    CW     FEMRET-002                                   3339  W 859
4            CW     MANRET-002                                   3343  W 878
7            MCW    MANRET             0239                      3347  M 880 239      MALE RETURNS CNT
1            W                                                   3354  2
2            CC                                          J       3355  F  J
7            MCW    FEMRET             0239                      3357  M 861 239      FEML RETURNG CNT
1            W                                                   3364  2
2            CC                                          J       3365  F  J
4            CS     0299                                         3367  / 299
7            MCW    TOTREC             0233                      3371  M 833 233      TOTL RECORDS ON
7            MCS    RACC6              0239                      3378  Z 807 239        TAPE READ
1            W                                                   3385  2
2            CC                                          L       3386  F  L
7            MCW    LINE4              0278                      3388  M 759 278
1            W                                                   3395  2
4            CS     0299                                         3396  / 299
7            MCW    LINE5              0281                      3400  M 822 281
1            W                                                   3407  2
4            CS     0299                                         3408  / 299
7            MCW    LINE6              0280                      3412  M 884 280
1            W                                                   3419  2
4            CS     0299                                         3420  / 299
7            MCW    LINE7              0239                      3424  M 805 239
1            W                                                   3431  2
4            CS     0299                                         3432  / 299
7            MCW    N                  NOP2                      3436  N 668 A20
7            A      ONE                ACCUM3                    3443  A 656 676
8            B      HALT1              ACCUM3             4      3450  B D62 676 4 END IF DONE 4X
4            B      PRINT &007                                   3458  D 845
                    *
4  HALT1     H      HALT1                                        3462  . D62
1            H                                                   3466  .
                    *
                    *
   RTAPE            *READ TAPE SUBROUTINE INCLUDING CONSTANTS AND          OMITTED TO SAVE SPACE
                    *TAPE ERROR TOTAL COUNT PRINTING.
                    *
            END     BEGIN                                                  / L63 080
```

```
CT  LABEL    OP     A OPERAND          B OPERAND          D      LOC   INSTRUCTION COMMENTS     ADM04
            CTL    33
            ORG    0600
                   *
                   ***UPDATING ADMISSIONS RECORDS FOR PREDICTION***          PROGRAM # 4
                   *
                   *THIS PROGRAM READS EACH ADMISSIONS TAPE RECORD
                   *PRIOR TO PREDICTION AND CALCULATES THE ADJUSTED
                   *SAT SCORES, ADJUSTED ACHIEVEMENT SCORES, AND
                   *ADJUSTED CLASS RANKS FOR THOSE READY TO BE PRE-
                   *DICTED. NON-FRESHMEN ARE NOT EXAMINED
                   *
                   *    SWITCH B- LISTS ALL ACTIVE FRESHMEN APPLICA-
                   *              TIONS MISSING INFORMATION OR WITH
                   *              INCORRECT INFORMATION WHICH CANNOT
                   *              BE PROCESSED BY THE PROGRAM
                   *
                   *TOTALS  OF COMPLETED APPLICATIONS READY TO PRE-
                   *DICT AND OF ACCEPTED APPLICATIONS ARE PRINTED
                   *AT THE END OF UPDATING. THOUGH ALL APPLICATIONS
                   *ARE UPDATED, ONLY THOSE WHICH ARE ACTIVE ARE
                   *COUNTED OR LISTED. THOSE READY TO BE PREDICTED
                   *ARE MARKED FOR IDENTIFICATION
                   *
                   *                INSTRUCTIONS
                   *
                   *CURRENT ADMISSIONS TAPE ON &U1, WRITE TAPE &U2
                   *PRINTS IN COLS 203-271
                   *
                   *
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```
CT  LABEL   OP     A OPERAND          B OPERAND          D      LOC   INSTRUCTION COMMENTS    ADMDR
                   *
                   *LEGEND TO HEAD PRINT OUT
                   *
32                 DC*    *      APPLICATIONS WHICH ARE INCOMPLET  0031
25         LEGEND  DC     *          C AND CANNOT BE PROCESSED     0056
32                 DC*    *      STUDENTS NAME        NUMBER   NO  0081
32                 DC     *       A T  ACH LTHGH  NO MARK    STAT  0120
 2         HEADUP  DC     *                                   VU   0156
 1         GRPMRK  DC*    *                                        0173
                   *
                   *TAPE LABEL ROUTINE
                   *
 7         BEGIN   LCA    GRPMRK             0291                 0174  L  721 241
 2                 MC*    %U2                0211           H     0731  M  %U2  211  R  READ STAPE LABEL
 1                 *                                        D     0732  /                WRITE STAPE LABEL
 5                 CU     %U2                                      0740  U  %U2  0
 8                 MC*    %U1                0211           H     0743  M  %U1  211  R  READ STAPE LABEL
 1                 *                                              0753  /                PRINT STAPE LABEL
 1                 *                                              0754  1                READ HEADING CARD
 1                 MCM    0001               0211                0755  P  001  211      HEADING TO PRINT
 7                 *                                              0762  /                PRINT HEADING
 2                 CC                                       I     0763  F  1             ADJUST PAPER
 2                 H                                              0765  .                HALT & PROCEED
 1                 MC*    %U2                0211           0     0766  M  %U2  211  0   WRITE STAPE LABEL
 6                 CS     0299                                     0774  /  299           CLEAR PRINT AREA
                   *
                   *HEADING FOR PRINTOUT
                   *
 7                 MC*    LEGEND             0262                 0775  M  656 262       MOVE LEGEND
 1                 *                                              0781  /                PRINT
 2                 CC                                       J     0786  F  2             SPACE 1
 4                 CS     0299                                     0788  /  299           CLEAR PRINT AREA
 7                 MC*    HEADUP             0271                 0792  M  722 271       MOVE 2ND LINE
 1                 *                                              0799  /                PRINT
 2                 CC                                       J     0803  F  2             SPACE 1
 4                 CS     0299                                     0805  /  299
 4                 CS     0080                                     0810  .  U6  063
 7                 S*     0056               0063                0817  .  U67
 4                 S*     0067                                    0821  1  056
 4                 R      0056                                    0825  .
 1                 H                                                    U  724
                   EX     BEGIN
                   *
                   ORG    0581
 4         START   CS     0080                                     0581  /  080
 4                 B      READ1                                    0587  U  707
                   *
                   *DEFINE SYMBOLS ON TAPE RECORD
                   *
 7         TAPENO  DC*    0357                                     0357
 5         TSTATS  DC*    0362                                     0362
 1         TVETS   DC*    0364                                     0364
20         TNAME   DC*    0384                                     0384
 1         TSEX    DC*    0385                                     0385
 1         TCATGY  DC*    0386                                     0386
 1         CHKSTP  DC*    0390                                     0390
 4         TRANK   DC*    0401                                     0401
 4         TCLASS  DC*    0405                                     0405
 2         ADJRNK  DC*    0413                                     0413
 3         A-SATV  DC*    0416                                     0416
 3         A-SATM  DC*    0419                                     0419
 3         ADJACM  DC*    0422                                     0422
 1         TOTSAT  DC*    0423                                     0423
 2         TOTLVL  DC*    0425                                     0425
 2         PREDAV  DC*    0428                                     0428
 1         SATL-1  DC*    0429                                     0429
 3         SATV-1  DC*    0432                                     0432
 3         SATM-1  DC*    0435                                     0435
 1         SATL-2  DC*    0436                                     0436
 3         SATV-2  DC*    0439                                     0439
 3         SATM-2  DC*    0442                                     0442
 1         SATL-3  DC*    0443                                     0443
 3         SATV-3  DC*    0446                                     0446
 3         SATM-3  DC*    0449                                     0449
 1         SATL-4  DC*    0450                                     0450
 3         SATV-4  DC*    0453                                     0453
 3         SATM-4  DC*    0456                                     0456
 1         SATL-5  DC*    0457                                     0457
 3         SATV-5  DC*    0460                                     0460
 3         SATM-5  DC*    0463                                     0463
 1         SATL-6  DC*    0464                                     0464
 3         SATV-6  DC*    0467                                     0467
 3         SATM-6  DC*    0470                                     0470
 4         ACCACM  DC*    0540                                     0540
 2         TOTACM  DC*    0542                                     0542
 1         RDYMRK  DC*    0569                                     0569
                   *
                   *CONSTANTS USED BY PROGRAM
                   *
                   ORG    0100
11         RDYMEN  DC*    *                          MALES READY   0110
11         RDYFEM  DC*    *                          FEMLS READY   0121
10         RDYTOT  DC*    *                           TOTL READY   0131
11         ACCMEN  DC*    *                          MALES ACCPT   0142
11         ACCFEM  DC*    *                          FEMLS ACCPT   0153
10         ACCTOT  DC*    *                           TOTL ACCPT   0163
10         VETAPP  DC*    *                           VETS APPNS   0173
10         BVAAPP  DC*    *                           BVAS APPNS   0183
 4         VERTOT  DC*    *                                        0187
 4         MTHTOT  DC*    *                                        0191
 4         VERCMP  DC*    *                                        0195
 4         MTHCMP  DC*    *                                        0199
                   ORG    0590
 4         TOTMEN  DC*    *                                        0593
 4         TOTFEM  DC*    *                                        0597
 4         TOTSTU  DC*    *                                        0601
 4         STUTOT  DC*    *                                        0605
 4         FEMTOT  DC*    *                                        0609
 4         MENTOT  DC*    *                                        0613
 4         VETCNT  DC*    *                                        0617
 4         BVAS    DC*    *                                        0621
 1         AONE    DC*    *                                   1    0622
 1         ATHREE  DC*    *                                   3    0623
 1         AFIVE   DC*    *                                   5    0624
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CT  LABEL    OP     A OPERAND          B OPERAND          J          LOC    INSTRUCTION COMMENTS     ADM04
1   CONS     DC@    @                                     0          0625
1   ARLENE   DC@    @                                     1          0626
2   TUTTON   DC@    @                                     21         0628
2   TWTTSX   DC@    @                                     30         0630
2   FORMIV   DC@    @                                     40         0632
2   NINFIV   DC@    @                                     50         0634
6   BLANK    DC@    @                                                0638
8   ZERO8    DC@    @                                     00000000   0646
8   HUNDRD   DC@    @                                                0654
4   TWENTY   DC@    @                                                0658
1   THIRTY   DC@    @                                                0659
3   ENDSEQ   DC@    0089                                             0664
1   SWITCH   DC     @                                                0660
5   ERROR    DC@    @                                     ERROR      0663
1   F        DC@    @                                     F          0666
1   S        DC@    @                                     S          0667
3   VET      DC@    @                                     VET        0670
1   LETTER   DC@    @                                     L          0671
3   ADDR1    DSA    @                  TWELET             ADR1       0674
3   ADDR2    DSA    @                  NLET               ADR2       0677
3   ADDR3    DSA    @                  SAMLET             ADR3       0680
                    @
                    @LOOK-UP TABLE FOR CONVERTING INVERTED RANK IN
                    @CLASS TO STANDARD SCORE SCALE
                    @
2                   DC@    @                                     80         0682
6   TABLE1   DC@    @                                     0017       0686
5                   DC@    @                                     780021     0692
5                   DC@    @                                     780031     0698
5                   DC@    @                                     770041     0704
5                   DC@    @                                     760052     0710
5                   DC@    @                                     750072     0716
5                   DC@    @                                     740091     0722
5                   DC@    @                                     730123     0728
5                   DC@    @                                     720156     0734
5                   DC@    @                                     710203     0740
5                   DC@    @                                     700257     0746
5                   DC@    @                                     690325     0752
5                   DC@    @                                     680402     0758
5                   DC@    @                                     670496     0764
5                   DC@    @                                     660607     0770
5                   DC@    @                                     650736     0776
5                   DC@    @                                     640886     0784
5                   DC@    @                                     631057     0790
5                   DC@    @                                     621252     0796
5                   DC@    @                                     611470     0800
5                   DC@    @                                     601712     0806
5                   DC@    @                                     591978     0812
5                   DC@    @                                     582267     0818
5                   DC@    @                                     572579     0824
5                   DC@    @                                     562913     0830
5                   DC@    @                                     553269     0836
5                   DC@    @                                     543644     0842
5                   DC@    @                                     534038     0848
5                   DC@    @                                     524453     0854
5                   DC@    @                                     514887     0860
5                   DC@    @                                     505341     0866
5                   DC@    @                                     495815     0872
5                   DC@    @                                     485307     0878
5                   DC@    @                                     474818     0884
5                   DC@    @                                     464348     0890
5                   DC@    @                                     453897     0896
5                   DC@    @                                     443466     0902
5                   DC@    @                                     433054     0908
5                   DC@    @                                     422661     0914
5                   DC@    @                                     412287     0920
5                   DC@    @                                     401932     0926
5                   DC@    @                                     391596     0932
5                   DC@    @                                     381279     0938
5                   DC@    @                                     370981     0944
5                   DC@    @                                     360702     0950
5                   DC@    @                                     350442     0956
5                   DC@    @                                     340201     0962
5                   DC@    @                                     329979     0968
5                   DC@    @                                     319776     0974
5                   DC@    @                                     309592     0980
5                   DC@    @                                     299427     0986
5                   DC@    @                                     289281     0992
5                   DC@    @                                     279154     0998
5                   DC@    @                                     269046     1004
5                   DC@    @                                     258957     1010
5                   DC@    @                                     248887     1016
5                   DC@    @                                     238836     1022
5                   DC@    @                                     228804     1028
5                   DC@    @                                     218791     1034
5                   DC@    @                                     208797     1040
5                   DC@    @                                     198822     1046
5                   DC@    @                                     188866     1052
5                   DC@    @                                     178929     1058
5                   DC@    @                                     169011     1064
5                   DC@    @                                     159112     1070
5                   DC@    @                                     149232     1076
5                   DC@    @                                     139371     1082
5                   DC@    @                                     129530     1088
5                   DC@    @                                     119707     1094
5                   DC@    @                                     109903     1100
5                   DC@    @                                     100118     1106
5                   DC@    @                                     090353     1112
5                   DC@    @                                     080606     1118
5                   DC@    @                                     070879     1124
5                   DC@    @                                     061171     1130
5                   DC@    @                                     051482     1136
5                   DC@    @                                     041813     1142
5                   DC@    @                                     032163     1148
5                   DC@    @                                     022533     1154
5                   DC@    @                                     012922     1160
5                   DC@    @                                     003331     1166
5                   DC@    @                                     993759     1172
5                   DC@    @                                     984207     1178
5                   DC@    @                                     974675     1184
5                   DC@    @                                     965162     1190
5                   DC@    @                                     955669     1196
5                   DC@    @                                     946195     1202
5                   DC@    @                                     936741     1208
5                   DC@    @                                     927307     1214
5                   DC@    @                                     917893     1220
5                   DC@    @                                     908498     1226
5                   DC@    @                                     899124     1232
5                   DC@    @                                     889769     1238
5                   DC@    @                                     880435     1244
5                   DC@    @                                     871120     1250
5                   DC@    @                                     861826     1256
5                   DC@    @                                     852551     1262
5                   DC@    @                                     843297     1268
5                   DC@    @                                     834063     1274
5                   DC@    @                                     824849     1280
5                   DC@    @                                     815655     1286
5                   DC@    @                                     806482     1292
5                   DC@    @                                     797329     1298
5                   DC@    @                                     788196     1304
5                   DC@    @                                     779084     1310
5                   DC@    @                                     769993     1316
5                   DC@    @                                     760922     1322
5                   DC@    @                                     751872     1328
5                   DC@    @                                     742843     1334
5                   DC@    @                                     733834     1340
5                   DC@    @                                     724847     1346
5                   DC@    @                                     715881     1352
5                   DC@    @                                     706936     1358
5                   DC@    @                                     698012     1364
5                   DC@    @                                     689110     1370
5                   DC@    @                                     680229     1376
5                   DC@    @                                     671370     1382
5                   DC@    @                                     662532     1388
5                   DC@    @                                     653716     1394
5                   DC@    @                                     644922     1400
5                   DC@    @                                     636150     1406
5                   DC@    @                                     627400     1412
5                   DC@    @                                     618672     1418
5                   DC@    @                                     609967     1424
5                   DC@    @                                     601284     1430
5                   DC@    @                                     592624     1436
5                   DC@    @                                     583987     1442
5                   DC@    @                                     575373     1448
5                   DC@    @                                     566782     1454
5                   DC@    @                                     558215     1460
5                   DC@    @                                     549671     1466
5                   DC@    @                                     541151     1472
5                   DC@    @                                     532655     1478
5                   DC@    @                                     524183     1484
5                   DC@    @                                     515735     1490
5                   DC@    @                                     507312     1496
5                   DC@    @                                     498913     1502
5                   DC@    @                                     490539     1508
5                   DC@    @                                     482190     1514
5                   DC@    @                                     473866     1520
5                   DC@    @                                     465568     1526
5                   DC@    @                                     457296     1532
5                   DC@    @                                     449049     1538
5                   DC@    @                                     440829     1544
5                   DC@    @                                     432636     1550
5                   DC@    @                                     424469     1556
5                   DC@    @                                     416330     1562
5                   DC@    @                                     408219     1568
5                   DC@    @                                     400135     1574
5                   DC@    @                                     392080     1580
5                   DC@    @                                     384054     1586
5                   DC@    @                                     376057     1592
5                   DC@    @                                     368090     1598
5                   DC@    @                                     360153     1604
5                   DC@    @                                     352246     1610
5                   DC@    @                                     344370     1616
5                   DC@    @                                     336525     1622
5                   DC@    @                                     328712     1628
5                   DC@    @                                     320931     1634
5                   DC@    @                                     313183     1640
5                   DC@    @                                     305468     1646
5                   DC@    @                                     297787     1652
5                   DC@    @                                     290140     1658
5                   DC@    @                                     282528     1664
5                   DC@    @                                     274952     1670
5                   DC@    @                                     267413     1676
5                   DC@    @                                     259911     1682
5                   DC@    @                                     252447     1688
5                   DC@    @                                     245022     1694
5                   DC@    @                                     237637     1700
5                   DC@    @                                     230294     1706
5                   DC@    @                                     222993     1712
5                   DC@    @                                     215736     1718
5                   DC@    @                                     208524     1724
5                   DC@    @                                     201359     1730
5                   DC@    @                                     194242     1736
5                   DC@    @                                     187175     1742
5                   DC@    @                                     180160     1748
5                   DC@    @                                     173199     1754
5                   DC@    @                                     166294     1760
5                   DC@    @                                     159447     1766
5                   DC@    @                                     152661     1772
5                   DC@    @                                     145938     1778
5                   DC@    @                                     139281     1784
5                   DC@    @                                     132693     1790
5                   DC@    @                                     126177     1796
5                   DC@    @                                     119736     1802
5                   DC@    @                                     113374     1808
5                   DC@    @                                     107095     1814
5                   DC@    @                                     100904     1820
5                   DC@    @                                     094806     1826
5                   DC@    @                                     088807     1832
5                   DC@    @                                     082914     1838
5                   DC@    @                                     077135     1844
5                   DC@    @                                     071480     1850
5                   DC@    @                                     065960     1856
5                   DC@    @                                     060589     1862
5                   DC@    @                                     055383     1868
5                   DC@    @                                     050363     1874
5                   DC@    @                                     045557     1880
5                   DC@    @                                     041000     1886
5                   DC@    @                                     036750     1892
5                   DC@    @                                     032900     1898
5                   DC@    @                                     029600     1904
5                   DC@    @                                     027100     1910
5                   DC@    @                                     025900     1916
5                   DC@    @                                     026000     1922
5                   DC@    @                                     027900     1928
5                   DC@    @                                     032000     1934
5                   DC@    @                                     038900     1940
5                   DC@    @                                     048000     1946
5                   DC@    @                                     060000     1952
5                   DC@    @                                     076000     1958
5                   DC@    @                                     099000     1964
5                   DC@    @                                     130000     1970
5                   DC@    @                                     180000     1976
5                   DC@    @                                     270000     1982
5                   DC@    @                                     450000     1988
5                   DC@    @                                     999999     1994
                    @
                    @READ TAPE FILE, SELECTING ONLY APPLICANT RECORDS
                    @FOR PROCESSING AND WRITING ALL RECORDS OUT ON
                    @TAPE
                    @
6   READ1    B      TAPE,10                                     1107  0 0176
6   TPWAIT   B      @TAPE                                       1111  0 0000
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```
CT  LABEL    OP     A OPERAND          B OPERAND          D     LOC   SYNTHESIZED COMMENTS          ASMSTA
 6  TAPE(K)  S      STATE                                       1337  0 1.99
 7          C      T(CATL#            F                        1338  1 305 888
 7          C      TPBUSY             /                        1340  0 .791 /
 7          C      TSTAT1-256         K                        1341  1 314 BUSY
 7          C      TPBUSY             /                        1343  0 .791 /
 6          C      WETCHR             SATN=1                   1344  0 .729 8.5%
 6          C      IS SAT                                      1346  0 .729
 6  WETCHR  C      WETTST             TWETS              K     1347  1 .791 256 K
 6  DUECHR  C      DUE                CHKSUP             K     1349  1 .594 298 C
                 *
                 *RECORD MISSING SCHOLASTIC APTITUDES TEST
                 *
 7  NO SAT  MC@    A                  D22F                     1351  0 .667 237       NEVER A TO MARRY
 6  SWTCH   SA     SWITCH                                      1352  1 .8605          OF TO SWITCH
 6          B      CHKACH                                      1353  1 .203           SKIP TO ACH CHK
                 *
                 *VETERANS APPLICATION AND NO SAT SCORE
                 *
 6  VETTST  C      A(PTAD)            TSTAT1-003         K     1355  1 .259 .259 K    CNT OF REC OF 17
 7          A      ADONE              ALTCNT                   1356  0 .827 .827      YEARS AGO TO ALT
 6          D      TPBUSY                                      1358  0 .791
                 *
                 *DUE APPLICATION AND NO SAT USERS
                 *
 6  DUE     C      A(PTAD)            TSTAT1-003         K     1361  1 .259 .259 K    CNT OF REC OF 17
 7          A      ADONE              DUE1                     1362  0 .827 .827      ACT TO DUE CHANGE
 6          D      TPBUSY                                      1364  0 .791
                 *
                 *CALCULATING THE ADJUSTED SCHOLASTIC APTITUDE
                 *SCORE FOR UP TO SIX TEST VERSIONS
                 *
 7  IS SAT  MC@    BLANK              ATWTOT                   1366  0 1.39 1.11
 7          MC@    BLANK              VERTOT                   1367  0 1.39 1.19
 7          MC@    BLANK              MTHCNT                   1368  0 1.39 1.39
 7          MC@    BLANK              VLGCNT                   1369  0 1.39 1.95
 7          MC@    BLANK              A-SATM                   1370  1 1.99 .659      IF ADJ SAT SCORE
 5          D      CHKACH             /                        1371  1 .263 /         SKIP TO ACHIEV
                 *
                 *THE TOTAL ACCUMULATED LEVEL IS A UNIQUE NUMBER
                 *REPRESENTING THE POSSIBLE COMBINATIONS OF SATS,
                 *IN THE APPROPRIATE SUBROUTINE, THE ADJUSTED SAT
                 *SAT IS CHECKED, WRITING AN ERROR MESSAGE IF IN-
                 *CONSISTANT
                 *
 6          D      NO SAT             TOTLVL                   1294  0 .791 .625      SKIP NO SATS
 6          D      TWOCHR             TOTLVL             2     1272  0 .756 .625 2    TWO OR TWELVE
 6          D      THRCHR             TOTLVL             3     1280  0 .968 .625 3    THREE OR THIRTEEN
 6          D      TOTA/6             TOTLVL             4     1288  0 1.15 .625 4
 6          D      TOTL5              TOTLVL             5     1296  0 1.81 .625 5
 6          D      TOTA/6             TOTLVL             6     1304  0 1.15 .625 6
 6          D      TOTL7              TOTLVL             7     1312  0 .976 .625 7
 6          D      TOTL8              TOTLVL             8     1320  0 1.07 .625 8
 6          D      TOTL9              TOTLVL             9     1329  0 .922 .625 9
 6          D      TOTL10             TOTLVL             0     1336  0 .936 .625 0
 6          D      TOTL11             TOTLVL             1     1345  0 .985 .625 1
 4          D      ERRMSG                                       1352  0 .760           ERROR-NOT 0-9
 8  TWOCHR  D      ERRMSG             TOTLVL-001         1     1356  1 .705 .624 1    NO 12 POSSIBLE
 4          D      TOT2/3                                       1360  0 .791
 8  THRCHR  D      TOTL13             TOTLVL-001         1     1363  0 .261 .624 1
 4          B      TOT2/3                                       1374  0 .791
                 *
                 *AN ERROR MESSAGE IS PRINTED IF TOTAL LEVEL DOES
                 *NOT AGREE WITH THE TOTAL NUMBER OF SATS CHECK
                 *SHOULD CORRESPOND
                 *
 7  ERRMSG  MC@    ERROR              0239                     1380  0 .663 239       MORE ERROR MESSG
 4          B      SETL@                                       1387  0 .778           THEN SKIP COMPTN
                 *
                 *COMPUTATION FOR TOTAL LEVEL 2 (ONE OR SCORE)
                 *AND 3 (ONE OR SCORE)
                 *
 8  TOT2/3  D      DK2/3              TOTSAT             1     1391  0 .923 .623 1    PROCESS/TOTSAT 1
 4          D      ERRMSG                                       1393  0 .760           ERROR IF NOT
 7  DK2/3   MC@    SATN=1             A-SATM                   1403  0 .634 .619      MATH TO ADJ MATH
 1          MC@                                                1410  0                WORD TO ADJ VERB
 4          B      CHKACH                                      1411  0 .263           SKIP TO ACHIEV
                 *
                 *COMPUTATION FOR TOTAL LEVEL 4 (TWO OR SCORES)
                 *AND 6(TWO OR SCORES)
                 *
 8  TOT4/6  D      DK4/6              TOTSAT             2     1415  0 .927 .623 2    PROCESS/TOTSAT 2
 4          D      ERRMSG                                       1423  0 .760           ERROR IF NOT
 7  DK4/6   A      SATN=1             ATWTOT                   1427  1 .975 .331      MORE FIRST MATH
 7          A      SATV=1             VERTOT                   1436  1 .662 .187      FIRST WORDS
 7          A      SATN=2             ATWTOT                   1441  1 .662 .331      SECOND MATH
 7          A      SATV=2             VERTOT                   1450  1 .639 .187      SECOND WORDS
 7          MC@    ADDR2              ENDHLF6003               1455  0 .877 -.62      SUBSTR (SCORE IF
 8          D      DIVBY2             TOTLVL             4     1462  1 .299 .625 4    TOTLEVEL FOUR
 7          MC@    ADDR3              ENDHLF6003               1470  0 .655 -.62      IF TOTLEVEL SIX
 4          B      DIVBY2                                      1477  1 .299
                 *
                 *COMPUTATION FOR TOTAL LEVEL 5 (ONE OR AND ONE
                 *SR SCORE)
                 *
 8  TOTL5   D      DK5                TOTSAT             2     1481  0 .923 .623 2    PROCESS/TOTSAT 2
 4          D      ERRMSG                                       1489  0 .760           ERROR IF NOT
 6  DK5     D      ADD A              SATL=1             2     1493  0 .915 .619 2    1ST OR, ADD SMCS
 7          A      SATN=1             ATWTOT                   1501  1 .975 .331      SR, ADD TWICE
 7          A      SATV=1             VERTOT                   1508  1 .639 .187
 7  ADD A   A      SATN=1             ATWTOT                   1515  1 .975 .331
 7          A      SATV=1             VERTOT                   1522  1 .639 .187
 8          D      ADD B              SATL=2             2     1529  0 .951 .636 2    2ND OR, ADD SMCS
 7          A      SATN=2             ATWTOT                   1537  1 .662 .331      SR, ADD TWICE
 7          A      SATV=2             VERTOT                   1546  1 .639 .187
 7  ADD B   A      SATN=2             ATWTOT                   1551  1 .662 .331
 7          A      SATV=2             VERTOT                   1558  1 .639 .187
 7          MC@    ADDR2              ENDDIF6003               1565  0 .877 -.90      SUBSTR (SCORE
 4          B      DIVBY3                                      1572  1 -.63           FOR TOTLEV 5
                 *
                 *COMPUTATION FOR TOTAL LEVEL 7 (TWO OR AND ONE
                 *SR SCORE
                 *
 8  TOTL7   D      DK7                TOTSAT             3     1576  1 .000 .623 3    PROCESS/TOTSAT 3
 4          B      ERRMSG                                       1584  1 .760           ERROR IF NOT
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CF LABEL OP A OPERAND B OPERAND C LOC INSTRUCTION COMMENTS

[illegible]

*COMPUTATION FOR TOTAL LEVEL [illegible]

[illegible]

*SUBROUTINE TO DIVIDE BY TWO BY ADDITION

[illegible]

*SUBROUTINE TO DIVIDE BY THREE BY ADDITION

[illegible]

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CT  LABEL    OP    A OPERAND          B OPERAND          D      LOC   INSTRUCTION COMMENTS     ADMOD
                   *
                   *ADJUSTMENTS OF TOTAL MATH AND VERBAL TO COMPEN-
                   *SATE FOR ROUNDING OFF AND TO TAKE CARE OF
                   *RAISED TOTALS CAUSED BY BEST PRACTICE
                   *
 7  NEXT     A     AFIVE              MTHCMP                    2099  A 624 199  HALF ADJUSTMENT
 7           A     AFIVE              VERCMP                    2106  A 624 195
 4           B     RESULT                                       2113  U 249
                   *
 7  SUBEXT   S     FORFIV             MTHCMP                    2117  S 632 199  HALF ADJUST &
 7           S     FORFIV             VERCMP                    2124  S 632 195     SUBTRACT FIVE
 4           B     RESULT                                       2131  R 249
                   *
 7  TENEXT   S     NINEIV             MTHCMP                    2135  S 634 199  HALF ADJUST &
 7           S     NINEIV             VERCMP                    2142  S 634 195     SUBTRACT TEN
                   *
 7  RESULT   MCW   MTHCMP-001         A-SATH                    2149  M 199 613  MOVE IN ADJ MATH
 7           MCW   VERCMP-001         A-SATV                    2156  M 174 616  MOVE IN ADJ VERB
                   *
                   *PRESENCE OF ACHIEVEMENT TESTS IS CHECKED. WHEN
                   *PRESENT, THE ADJUSTED ACHIEVEMENT SCORE IS
                   *CALCULATED
                   *
 0  CHKACH   B     CHKCLS             ACCACH                    2163  B 637 560  SKIP/NO ACHIEVS
 0           B     COMACH             ADJACH                    2171  B 203 422  ADJ ACH NOT DONE
 6           B     CHKCLS                                       2179  B 637
                   *
                   *CALCULATING THE ADJUSTED ACHIEVEMENT SCORE
                   *
 7  COMACH   MCW   0       -003        DIVIDE-001                2183  M 486 629
 6           B     DIVIDE                                       2190  B 621
 3           DSA   0                   TOTACH             542    2196                DIVISOR
 3           DSA   0                   ACCACH             540    2199                DIVIDEND
 2           DCW   0                                      02     2201
 3           B     ACHMSG                           E           2202  B 426 E       OVERFLOW CONDTN
                   *
 4           SW    QUOT   +002                                  2207  S 120
 7           MCS   QUOT               ADJACH                    2211  Z 122 422
 4           CW    QUOT   +002                                  2216  B 120
 4           B     CHKCLS                                       2222  B 637
                   *
                   *AN ERROR MESSAGE IS PRINTED IF ADJUSTED ACHIEV
                   *CANNOT BE CALCULATED
                   *
 7  ACHMSG   MCW   ERROR              0250                      2226  M 663 250  MOVE ERROR MSG
 4           SW    SWITCH                                       2233  S 660
                   *
                   *PRESENCE OF CLASS RANK IS CHECKED. WHERE PRE-
                   *SENT, THE ADJUSTED CLASS RANK IS CALCULATED
                   *
 7  CHKCLS   MCW   BLANK              INDEX1                    2237  M 638 289
 0           B     NOCLAS             TCLASS                    2244  B 664 405  SKIP/ NO CLASS
 0           B     CALRNK             ADJRNK                    2252  B 610 613  CALC IF NOT DONE
 4           B     ACTAPP                                       2260  U 429         SKIP/ CALCULATED
                   *
                   *MESSAGE INDICATING CLASS RANK MISSING
                   *
 7  NOCLAS   MCW   X                  0259                      2264  M 667 259
 4  SWSET    SW    SWITCH                                       2271  S 660
 4           B     ACTAPP                                       2275  U 429
                   *
                   *ERROR MESSAGE IF ADJUSTED CLASS RANK CANNOT BE
                   *CALCULATED
                   *
 7  CLSMSG   MCW   ERROR              0261                      2279  M 665 261
 4           B     SWSET                                        2286  U 471
                   *
                   *CALCULATING THE INVERTED PERCENTILE RANK
                   *
 6  CALRNK   B     FRACTN             TCLASS             6      2290  U 626 405  6 FRACTIONAL RANK
 7           C     TRANK              TCLASS                    2298  C 401 405  ERROR MSG IF RANK
 5           B     CLSMSG                                7      2305  U 479 7       LARGR THAN SIZE
                   *
 7           MCW   ZLOOP              UNKCMP                    2310  M 645 534
 7           MCW   TRANK              UNKCMP-004                2317  M 401 450
 7           S     AFIVE              UNKCMP-003                2324  S 634 551
 7           MZ    BLANK              UNKCMP-003                2331  Y 638 641
                   *
 7           MCW   0       -003       DIVIDE-001                2338  M 641 620
 6           B     DIVIDE                                       2345  U 621
 3           DSA   0                   TCLASS             435    2351
 3           DSA   0                   UNKCMP             534    2356
 2           DCW   0                                      07     2356
 5           B     CLSMSG                           E           2357  U 479 E
                   *
 6           SW    QUOT   -003                                  2362  S 113
 7           MCW   QUOT               INDEX4                    2366  M 627 458
 7           MZ    BLANK              INDEX4                    2373  Y 638 658
 6           CW    QUOT   -003                                  2380  S 113
                   *
                   *COMPARING THE INVERTED RANK AGAINST STANDARD
                   *SCORE TABLE
                   *
 7  LOOKUP   C     TABLE1       3     INDEX4                    2384  C 478 458  COMPARE INDEX4
 5           B     HIT                              7           2391  U 483 7       OF TABLE
 7           B     CONS               INDEX1                    2395  A 621 399  INCREASE INDEX
 0           B     CLSMSG             TABLE1        3     E     2403  U 479 646 E ERROR IF END OF
 6           B     LOOKUP                                       2411  U 606          TABLE
 7  HIT      MCW   TABLE1+004 (       ADJRNK                    2415  M 662 613  MOVE ADJUSTD RNK
 6           B     ACTAPP                                       2422  U 429
                   *
                   *COMPARING INVERTED FRACTIONAL RANK WITH APPRO-
                   *PRIATE TABLE
                   *
 6  FRACTN   B     LOOKFN             TCLASS-003        4      2426  U 631 632 4 CHECK FRACTIONAL
 6           B     ISTHRE             TCLASS-003        3      2434  U 867 632 3    IZATION TO HELP
 6           B     ITWOUP             TCLASS-003        6      2442  U 873 632 6    DETERMINE IN
 6           B     ITWOTH             TCLASS-003        5      2450  U 886 632 5       STHS
 5           B     CLSMSG                                       2458  U 479          LARGR IF NONE
 7  ISTHRE   B     ANINE              INDEX1                    2462  B 626 399  ADJUST INDEX1VG
 5           B     LOOKFN                                       2469  U 631          OF TABLE AC-
 7  ITWOUP   B     TWTYFV             INDEX1                    2473  B 636 399     CORDINGLY
 5           B     LOOKFN                                       2480  U 631
 7  ITWOTH   B     TWTYSX             INDEX1                    2484  B 630 399
                   *
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CT  LABEL   OP    A OPERAND          B OPERAND          D     LOC   INSTRUCTION COMMENTS    ADM04
 7  LOOKFN  C     TABLE2      1      THANK -003               2421  C 895 398
 5          U     AMIT                                   5    2498  U N22 5
 7          A     ATMREC             INDEXI                 2503  A 623 089
 8          B     CLSMSG             TABLE2      1      Z   2510  U K73 895 Z ERROR IF END OF
 4          B     LOOKFN                                     2518  B M31             TABLE
 7  AMIT    MC*   TABLE2-001  1      ADJRNK                 2522  M 894 413
                  *
                  *SKIP COUNT ROUTINE IF INCOMPLETE OR *ITHDRA*N
                  *
 5  ACTAPP  B     CLEAR*             TSTATS             K   2527  U 092 362 K SKIP IF *DN
 6          B*Z   ISW*               SWITCH             I   2537  V N95 660 I INCOMPLETE- MSG
 7          MC*   LETTER             RDYMRK                 2545  M 671 969     INDICATE READY
 4          B     CNTADD                                     2552  B 014           TO PREDICT
                  *
                  *LISTING ROUTINE FOR INCOMPLETE APPLICATIONS
                  *
 5  ISW*    B     PNTOUT                             B       2556  U N63 B       PRINT IF S W ON
 4          B     CLEAR*                                     2561  U 092         SKIP IF NOT
 7  PNTOUT  MC*   TNAME              0222                    2564  M 384 222     NAME TO PRINT
 7          MC*   TAPLNO             0231                    2572  M 397 231     NUMBER
 7          MC*   TSTATS             0271                    2579  M 362 271     APPLICATN STATUS
 8          B     VETMN              TSTATS6002         V    2586  B N78 364 V INDICATE *HETHER
 4          B     NONVET                                     2594  U 092           VETERAN
 7  VETRN   MC*   VLT                0241                    2598  M 670 241
 1  NONVET  *                                                2602  Z             PRINT DATA
 4          CS    0277                                       2606  / 277         CLEAR PRINT AREA
 4          B     CLEAR*                                     2610  B 092         SKIP COUNT ROUTN
                  *
                  *COUNT ROUTINE FOR ALL APPLICATIONS READY FOR
                  *PREDICTION AND THOSE ALREADY ACCEPTED
                  *
 8  CNTADD  B     ACPTAD             TSTATS-003         A   2614  U 093 329 A SKIP READY/ACPTD
 7          A     AONE               TOTSTU                 2622  A 622 601     ADD TO READYTOTL
 6          B     AMAN               TSEX               I   2629  U 095 385 I SKIP/ MALE
 7          A     AONE               TOTFLM                 2637  A 622 597     ADD TO FEML TOTL
 4          B     CLEAR*                                     2644  B 092         SKIP/ COUNTED
 7  AMAN    A     AONE               TOTMEN                 2648  A 622 593     ADD TO MEN READY
 4          B     CLEAR*                                     2655  U 092         SKIP/ COUNTED
 7  ACPTAD  A     AONE               STUTOT                 2659  A 622 605     ADD TO ACCPTTOTL
 5          B     FMAN               TSEX               I   2666  U 095 385 I SKIP/ MALE
 7          A     AONE               FEMTOT                 2674  A 622 609     ADD TO FEM ACPTD
 4          B     CLEAR*                                     2681  B 092         SKIP/ COUNTED
 7  BMAN    A     AONE               MENTOT                 2685  A 622 613     ADD TO MEN ACPTD
                  *
 4  CLEAR*  C*    SWITCH                                     2692  M 000         CLEAR MISSNG SW
 4          B     TP*HIT                                     2696  B 711         STUDENT PROCESSD
                  *
                  *END ROUTINE - UNLOAD TAPES AND PRINT TOTALS
                  *
 4  OUT     B     *UNLDI                                     2700  B C15         UNLOAD *HITE TP
 2  OUT2    CC                                         1   2704  F 1           ADJUST PAPER
 4          B     *FINAL                                     2706  B A26         PRINT HEAD ERROR
 4          B     *FINAL                                     2710  B D51         PRINT *HITE ERRS
 2          CC                                         1   2714  F 1           ADJUST PAPER
 4          CS    0299                                       2716  / 299         CLEAR PRINT AREA
 7          MC*   RDYMEN             0213                    2720  M 110 213     MALES READY
 7          MCS   TOTMEN             0220                    2727  Z 593 220     NUMBER
 1          *                                                2734  Z             PRINT
 7          MC*   RDYFEM             0213                    2739  M 121 213     FEMALES READY
 7          MCS   TOTFEM             0220                    2742  Z 597 220     NUMBER
 1          *                                                2749  Z             PRINT
 7          MC*   RDYTOT             0213                    2750  M 131 213     TOTAL READY
 7          MCS   TOTSTU             0220                    2757  Z 601 220     NUMBER
 1          *                                                2764  Z             PRINT
 2          CC                                         J   2769  F J           SPACE
 7          MC*   ACCMEN             0213                    2767  M 142 213     MALES ACCEPTED
 7          MCS   MENTOT             0220                    2774  Z 613 220     NUMBER
 1          *                                                2781  Z             PRINT
 7          MC*   ACCFEM             0213                    2782  M 151 213     FEMALES ACCEPTED
 7          MCS   FEMTOT             0220                    2789  Z 609 220     NUMBER
 1          *                                                2796  Z             PRINT
 7          MC*   ACCTOT             0213                    2797  M 163 213     TOTAL ACCEPTED
 7          MCS   STUTOT             0220                    2804  Z 605 220     NUMBER
 1          *                                                2811  Z             PRINT
 2          CC                                         J   2812  F J           SPACE
 7          MC*   VETAPP             0213                    2814  M 171 213     VETS APPLICATNS
 7          MCS   VETCNT             0220                    2821  Z 617 220     NUMBER
 1          *                                                2828  Z             PRINT
 7          MC*   RVAAPP             0213                    2829  M 183 213     RVA APPLICATIONS
 7          MCS   RVAS               0220                    2836  Z 621 220     NUMBER
 1          *                                                2843  Z             PRINT
 4  HALT    H     HALT                                       2844  * 244         HALT- END OF JOB
                  *
                  *
     *TAPL        *READ TAPE SUBROUTINE INCLUDING CONSTANTS AND          OMITTED TO SAVE SPACE
                  *TAPE ERROR TOTAL COUNT PRINTING*
                  *
                  *
     *TAPL        **RITE TAPE SUBROUTINE INCLUDING CONSTANTS AND         OMITTED TO SAVE SPACE
                  *TAPE ERROR TOTAL COUNT PRINTING*
                  *
     DIVIDE       *DIVIDE SYMBOLIC PROGRAM                               OMITTED TO SAVE SPACE
                  *
              END   START
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CT  LABEL   OP     A OPERAND        B OPERAND        D        LOC   INSTRUCTION COMMENTS    ADMOS
            CTL    33
            ORG    0600
                   *
                   *********CALCULATING PREDICTED AVERAGES*********        PROGRAM # 5
                   *
                   *THIS PROGRAM CALCULATES A PREDICTED AVERAGE FOR
                   *EVERY ACTIVE COMPLETED FRESHMAN APPLICATION IN-
                   *CLUDING THOSE ACCEPTED BUT AS YET UNPREDICTED.
                   *
                   *    NO SWITCH- A LABEL FOR THE ADMISSIONS EN-
                   *                VELOPE AND MATCHING CARD IS PRO-
                   *                DUCED FOR NEWLY PREDICTED & AS
                   *                YET UNACTED UPON APPLICATNS ONLY
                   *    SWITCH A -  A LABEL IS MADE FOR NEWLY PRE-
                   *                DICTED AND A CARD FOR ALL PRE-
                   *                VIOUSLY UNACTED UPON. USED AT END
                   *                OF YEAR.
                   *    SWITCH C -  ONLY ACTIVE TRANSFER STUDENTS ARE
                   *                EXAMINED AND A CARD PUNCHED FOR
                   *                EACH. A LIST OF NAMES IS ALSO
                   *                PRINTED
                   *    SWITCH D -  ONLY RETURNING STUDENTS ARE LIST-
                   *                ED AND A CARD PUNCHED
                   *    SWITCH E -  ONLY ACCEPTED AND UNNGRGUED STU-
                   *                DENTS ARE LABELED / OR LISTED /
                   *                AND CARDS PUNCHED
                   *    SWITCH F -  JANUARY FRESHMEN ARE LISTED AND
                   *                A CARD PUNCHED FOR EACH
                   *
                   *                 INSTRUCTIONS
                   *
                   *CURRENT ADMISSIONS TAPE ON $U1. WRITE TAPE $U2
                   *FOR LABEL STOCK USE 2 3/4 X 15/16 LABELS. IN-
                   *   SERTED AFTER HEADER HEADING
                   *LABELS PRINT IN COLS 202-226 ON FIVE LINES WITH
                   *   AUTOMATIC SPACING
                   *STOCK CARDS IN PUNCH SIDE
                   *FOR LIST JOBS, PRINTS IN COLS 202-263
                   *
                   *
                   *DEFINE SYMBOLS ON TAPE RECORD
                   *
 7  TAPEND  DCW      0357                                          0357
 5  TSTATS  DCW      0362                                          0362
 1  SEPJAN  DCW      0363                                          0363
 1  TVET    DCW      0364                                          0364
20  TNAME   DCW      0384                                          0384
 1  TSEX    DCW      0385                                          0385
 1  TCATGY  DCW      0386                                          0386
 1  TMAJOR  DCW      0388                                          0388
 1  CHKSTP  DCW      0390                                          0390
 6  TRANK   DCW      0401                                          0401
 4  TCLASS  DCW      0405                                          0405
 2  ADJRNK  DCW      0413                                          0413
 3  ADJVLR  DCW      0416                                          0416
 3  ADJMTH  DCW      0419                                          0419
 3  ADJACM  DCW      0422                                          0422
 2  PREDAV  DCW      0428                                          0428
 1  SAT/1L  DCW      0429                                          0429
 1  RDYMRK  DCW      0569                                          0569
                   *
                   *CONSTANTS USED BY THE PROGRAM
                   *
 1  RECDMK  DCW      *                                             0600
 1  GRPMRK  DCW      *                                             0601
 3  VSAT    DCW      *                                             0604
 3  MSAT    DCW      *                                             0607
 5  AVESTR  DCW      *                                             0612
 1  SAVE    DCW      *                                             0613
 5  CHKST   DCW      *                                   CHKST     0618
 3  FOR     DCW      *                                   FOR       0621
 3  P G     DCW      *                                   P G       0624
 5  BLANKS  DCW      *                                             0629
 1  SLASH   DCW      *                                   /         0630
 1  V       DCW      *                                   V         0631
 1  M       DCW      *                                   M         0632
 1  F       DCW      *                                   F         0633
 1  FIVE    DCW      *                                   5         0634
 3  EDITWD  DCW      *                                   *         0637
22  TITLES  DCW      *                V    M     ACM     CM        0659
                   *
                   *MATHEMATICAL CONSTANTS USED IN PREDICTION
                   *FORMULA
                   *
 2  VC/FEM  DCW      *                                   14        0661
 2  MC/FLM  DCW      *                                   13        0663
 2  RC/FLM  DCW      *                                   42        0665
 4  CC/FEM  DCW      *                                   1912      0669
 2  VC/ENG  DCW      *                                   86        0671
 2  MC/ENG  DCW      *                                   15        0673
 2  RC/ENG  DCW      *                                   42        0675
 4  CC/ENG  DCW      *                                   1699      0679
 2  VC/MEN  DCW      *                                   14        0681
 2  MC/MEN  DCW      *                                   13        0683
 2  RC/MEN  DCW      *                                   24        0685
 4  CC/MEN  DCW      *                                   0941      0689
                   *
                   *
                   *TAPE LABEL ROUTING
                   *
 7  BEGIN   LCA      GRPMRK      0291                              0690  L 001 291
 8          WCW      $U2         0211          M                   0697  W $U2 211 M  READ #TAPE LABEL
 1                   #                                             0705  2           PRINT #TAPE LABL
 5          CU       $U2                       B                   0706  U $U2 B      BACKSPACE #TAPE
 8          WCW      $U1         0211          R                   0711  W $U1 211 R  READ #TAPE LABEL
 1                   #                                             0719  2           PRINT #TAPE LABL
 1                   R                                             0720  1           READ HEADER CARD
 7          WCM      0001        0211                              0721  P 001 211    HEADER TO PRINT
 1                   #                                             0728  2           PRINT HEADER CD
 2          CC                                         1           0729  F 1         ADJUST PAPER
 1                   W                                             0731  *           HALT & OBSERVE
 8          WCW      $U2         0211          #                   0732  W $U2 211 #  #RITE #TAPE LABL
 4          CS       0299                                          0740  / 299       CLEAR PRINT AREA
                   *
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CT  LABEL   OP    A OPERAND          B OPERAND          D     LOC   INSTRUCTION COMMENTS          NOWDS
 4  TAPERD  B     RTAPE                                       0744  J #15          DIAL A RECORD
 8          B     ISAPPN             TSTATS-004         X     0746  M 760 346 X    SKIP IF NOT AN
 4          B     TP=RIT                                      0750  B 534          APPLICATION
 8  ISAPPN  B     TP=RIT             TSTATS             X     0760  S 853 362 X    SKIP IF MARRIED
 8          U     ISFRSM             TCATGY             F     0768  D 746 346 F    IDENTIFY FRESHMAN
 8          U     ISTRAN             TCATGY             T     0770  D 522 346 T      TRANSFERS AND
 8          U     ISRET              TCATGY             R     0784  D 308 346 R      RETURNING
 4          A     TP=RIT                                      0792  P 853
 5  ISFRSH  B     TP=RIT                                 C    0796  A 853 C        SKIP FALSE IF
 5          B     TP=RIT                                 D    0801  A 534 D          SWITCH C OR D
 8          B     CHKRDY             PREDAY                  0806  B 341 428      SKIP/ NO PREDAY
 8          B     ECHECK             TSTATS-003         X    0814  S 847 352 X    SKIP/ ACCEPTED
 5          A     PNCHCD                                F    0822  B 415 B        IF J=. PUNCH CARD
 5  ECHECK  B     CHKACC                                 E    0827  B 875 E        E=. CHECK ACCPTD
 5  FCHECK  B     CHKJAN                                 F    0832  H 887 F        F=. CHECK JANUARY
 4          B     TP=RIT                                      0837  H 853          OTHERWISE= SKIP
                  *
 8  CHKRDY  A     ECHECK             RDYMRK                   0841  J 427 569      SKIP/NOT READY
 4          D     PREDCT                                      0844  H 917          READY/ PREDICT
                  *
 4  TP=RIT  B     =TAPE                                       0851  E 284
 4          B     TAPERD                                      0857  B 744
                  *
 5  AFTERP  B     CHKACC                                 E    0861  D 875 E        AFTER PREDICTN=
 5          B     CHKJAN                                 F    0866  D 887 F          LABEL & PUNCH
 4          B     LABLIT                                      0871  L 531          UNLESS J=. E=F
 8  CHKACC  B     CDLIST             TSTATS-003         A    0875  U 412 352 X    J=. SKIP UNLESS
 4          B     TP=RIT                                      0883  D 853          ACCEPTED
 8  CHKJAN  B     CDLIST             SLPJAN             J    0887  R 412 353 J    J=. P=. SKIP UNLESS
 4          B     TP=RIT                                      0895  B 853          JANUARY 1ST=
                  *
 5  ISTRAN  B     CDLIST                                 C    0899  U 412 C        TRANSFER= SKIP
 4          B     TP=RIT                                      0904  B 853          UNLESS J=. C
                  *
 5  ISRET   B     CDLIST                                 D    0908  H 412 D        RETURNING= SKIP
 4          B     TP=RIT                                      0913  B 853          UNLESS J=. D
                  *
                  *SUBROUTINE TO CALCULATE THE PREDICTED AVERAGE
                  *FOR FRESHMAN RECORDS AS YET UNREJECTED AND
                  *WHICH CONTAIN ALL NECESSARY DATA FOR PREDICTION
                  *
 7  PREDCT  MC=    BLANKS             AVESTR                   0917  M 622 612
 7          MC=    ADJVER             VSAT                     0924  M 410 604
 7          MC=    ADJMTH             MSAT                     0931  M 419 607
 7          A      FIVL               VSAT                     0938  A 534 604
 7          A      FIVE               MSAT                     0945  A 534 607
 8          B      =OMAN              TSEX               2     0952  S 851 385 2
 8          B      ENGIN              TMAJOR             4     0960  S 716 388 4
                  *
                  *CALCULATION ROUTINE FOR NON-ENGINEER MALE
                  *
 7          MC=    *      -003        MULTI -001               0968  M 271 K36
 4          B      MULTI                                       0975  B K37
 3          DSA    *                  VC/MEN             681   0981
 3          DSA    *                  VSAT  -001         603   0984
 7          MC=    PROD               AVESTR                   0989  M 852 612
 7          MC=    *      -003        MULTI -001               0992  M 975 K36
 4          B      MULTI                                       0999  B K37
 3          DSA    *                  MC/MEN             681   1002
 3          DSA    *                  MSAT  -001         606   1008
 7          A      PROD               AVESTR                   1009  A M52 612
 7          MC=    *      -003        MULTI -001               1015  M 812 K36
 4          B      MULTI                                       1023  B K37
 3          DSA    *                  MC/MEN             681   1027
 3          DSA    *                  ADJMTH             413   1032
 7          A      PROD               AVESTR                   1035  A M52 612
 7          S      CC/MEN             AVESTR                   1040  S 689 612
 4          B      STORE                                       1047  B 513
                  *
                  *CALCULATION ROUTINE FOR FEMALE APPLICATION
                  *
 7  =OMAN   MC=    *      -003        MULTI -001               1051  M 856 K36
 4          B      MULTI                                       1058  B K37
 3          DSA    *                  VC/FEM             661   1064
 3          DSA    *                  VSAT  -001         603   1067
 7          MC=    PROD               AVESTR                   1066  M M52 612
 7          MC=    *      -003        MULTI -001               1074  M 878 K36
 4          B      MULTI                                       1082  B K37
 3          DSA    *                  MC/FEM             663   1088
 3          DSA    *                  MSAT  -001         606   1091
 7          A      PROD               AVESTR                   1092  A M52 612
 7          MC=    *      -003        MULTI -001               1099  M 702 K36
 4          B      MULTI                                       1106  B K37
 3          DSA    *                  MC/FEM             663   1112
 3          DSA    *                  ADJMTH             413   1115
 7          A      PROD               AVESTR                   1116  A M52 612
 7          S      CC/FEM             AVESTR                   1123  S 689 612
 4          B      STORE                                       1130  B 513
                  *
                  *CALCULATION ROUTINE FOR MALE ENGINEER
                  *
 7  ENGIN   MC=    *      -003        MULTI -001               1134  M 737 K36
 4          B      MULTI                                       1141  B K37
 3          DSA    *                  VC/ENG             671   1147
 3          DSA    *                  VSAT  -001         603   1150
 7          MC=    PROD               AVESTR                   1151  M M52 612
 7          MC=    *      -003        MULTI -001               1158  M 701 K36
 4          B      MULTI                                       1165  B K37
 3          DSA    *                  MC/ENG             673   1171
 3          DSA    *                  MSAT  -001         606   1174
 7          A      PROD               AVESTR                   1175  A M52 612
 7          MC=    *      -003        MULTI -001               1182  M 765 K36
 4          B      MULTI                                       1189  B K37
 3          DSA    *                  MC/ENG             675   1195
 3          DSA    *                  ADJMTH             413   1198
 7          A      PROD               AVESTR                   1199  A M52 612
 7          S      CC/ENG             AVESTR                   1206  S 689 612
 7  STORE   A      FIVL               AVESTR-001               1213  A 534 611      HALF ADJUST
 7          MC=    AVESTR-002         PREDAY                   1220  M 610 428
 4          B      AFTERP                                      1227  B 861
                  *
                  *FOLLOWING PRINTS A LABEL FOR NEWLY PREDICTED
                  *AND NOT YET ACCEPTED ACTIVE FRESHMAN APPLICA-
                  *TION
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CT  LABEL    OP    A OPERAND          B OPERAND          D      LOC    INSTRUCTION COMMENTS    ADMOS
                   *
 7  LABLIT   MCW    TNAME             0221                      1231   M 384 221
 7           LCA    EDITWD            0226                      1238   L 637 226
 7           MCE    PREDAY            0226                      1245   E 428 226
 1           W                                                  1252   2
 2           CC                                          J      1253   F  J
 4           CS     0229                                       1255   /  229
 7           MCW    TITLES            0223                      1259   M 659 223
 7           MCW    ADJVER            0205                      1266   M 416 205
 7           MCW    ADJMTH            0210                      1273   M 419 210
 7           MCW    ADJACH            0219                      1280   M 422 219
 7           MCW    ADJRNK            0226                      1287   M 413 226
 1           W                                                  1294   2
 2           CC                                          J      1295   F  J
 4           CS     0299                                       1297   /  299
 7           MCS    TRANK             0205                      1301   Z 401 205
 7           MCW    SLASH             0206                      1308   M 630 206
 7           MCS    TCLASS            0210                      1315   Z 405 210
 7           MCW    TAPENO            0218                      1322   M 357 218
 7           MCW    TMAJOR            0220                      1329   M 388 220
 8           B      PRNT3             CHKSTP                    1336   B U08 390
 8           B      GOOK              CHKSTP             F      1344   B T79 390  F
 8           B      DOLT              CHKSTP             P      1352   B T90 390  P
 8           B      ACHKST            CHKSTP             X      1360   B U01 390  X
 7           MCW    CHKSTP            0226                      1368   M 390 226
 4           B      PRNT3                                       1375   B U08
 7  GOOK     MCW    FOR               0226                      1379   M 621 226
 4           B      PRNT3                                       1386   B U08
 7  DOLT     MCW    P G               0226                      1390   M 624 226
 4           B      PRNT3                                       1397   B U08
 7  ACHKST   MCW    CHKST             0226                      1401   M 618 226
 1  PRNT3    W                                                  1408   2
 2           CC                                          L      1409   P  L          SPACE 1 AFTER PRT
 4           CS     0299                                       1411   /  299
 4           B      PNCHCD                                     1415   B V15
                   *
                   *FOLLOWING PRINTS A LIST OF NAMES,AS SELECTED BY
                   *THE PROGRAM.
                   *
 7  CDLIST   MCW    TCATGY            0202                      1419   M 386 202
 7           MCW    TNAME             0224                      1426   M 384 224
 7           MCW    TAPENO            0233                      1433   M 357 233
 7           MCW    TSEX              0236                      1440   M 385 236
 7           MCW    TSTATS            0243                      1447   M 392 243
 7           MCW    SEPJAN            0245                      1454   M 363 245
 7           MCW    TVET              0247                      1461   M 364 247
 7           MCW    V                 0250                      1468   M 631 250
 7           MCW    ADJVER            0253                      1475   M 416 253
 7           MCW    M                 0255                      1482   M 632 255
 7           MCW    ADJMTH            0258                      1489   M 419 258
 7           LCA    EDITWD            0263                      1496   L 637 263
 7           MCE    PREDAY            0263                      1503   E 428 263
 1           W                                                  1510   2
 4           CS     0299                                       1511   /  299
                   *
                   *FOLLOWING PUNCHES A CARD CONTAINING THE FIRST
                   *78 COLUMNS OF THE STUDENT RECORD, AS SELECTED
                   *BY THE PROGRAM
                   *
 7  PNCHCD   MCW    SAT/IL            SAVE                      1515   M 429 613
 7           LCA    RECOMK            SAT/IL                    1522   L 600 429
 7           MCW    RSTART            0103                      1529   P 351 103
 7           MCW    SAVE              SAT/IL                    1536   M 613 429
 1           P                                                  1543   &
 4           B      YPUNIT                                     1544   B 533
                   *
                   *ENDROUTINE
                   *
 4  OUT      B      BUNLDI                                     1548   U -31
 4  OUT2     B      #FINAL                                     1552   B Y42
 4           B      #FINAL                                     1556   B J07
 4  HALT     H      HALT                                       1560   . V60
                   *
                   *
      #TAPE1       *READ TAPE SUBROUTINE INCLUDING CONSTANTS AND          OMITTED TO SAVE SPACE
                   *TAPE ERROR TOTAL COUNT PRINTING.
                   *
                   *
      #TAPE        *WRITE TAPE SUBROUTINE INCLUDING CONSTANTS AND         OMITTED TO SAVE SPACE
                   *TAPE ERROR TOTAL COUNT PRINTING.
                   *
           END     BEGIN
```

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CT  LABEL    OP    A OPERAND          B OPERAND          D      LOC    INSTRUCTION COMMENTS    ADMOS
           CTL     33
           DNG     0585
                   *
                   *PREPARATION OF SUPPLEMENTARY RECORD FORM CARDS8          PROGRAM # 6
                   *
                   *THIS PROGRAM CREATES A SUPPLEMENTARY RECORD
                   *CARD FOR EVERY ACTIVE FRESHMAN APPLICATION FOR
                   *WHICH NO CARD HAS BEEN PREVIOUSLY PRODUCED
                   *POST GRADUATE CARDS ARE PUNCHED OUT FOR
                   *VERIFICATION OF HIGH SCHOOL CODING
                   *
                   *                INSTRUCTIONS
                   *
                   *CURRENT ADMISSIONS TAPE ON A U1, WHITE TAPE NU2
                   *BLANK SUPPLEMENTARY RECORD CARDS IN PUNCH SIDE
                   *AFTER CARDS ARE INTERPRETED THEY ARE SORTED TO
                   *  HIGH SCHOOL AND MASTER MAILING CARDS AHE
                   *  MERGED AHEAD OF THEM
                   *NO SWITCHES USED
                   *
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CT  LABEL    OP     A OPERAND        B OPERAND        D        LOC   INSTRUCTION COMMENTS    ADM06
                    *
                    *DEFINE SYMBOLS ON TAPE RECORD
                    *DEFINE LOCATIONS ON SUPPLEMENTARY RECORD CARD
                    *
     PNUMBR   DS     0150                                              0150
     PNAME    DS     0141                                              0141
     PSEX     DS     0151                                              0151
     PSCHL    DS     0157                                              0157
     PCLASS   DS     0165                                              0165
     PCHKST   DS     0166                                              0166
   7 TAPEND   DC*    0357                                              0357
   5 TSTATS   DC*    0362                                              0362
  20 TNAME    DC*    0384                                              0384
   1 TSEX     DC*    0385                                              0385
   1 TCATGY   DC*    0386                                              0386
   1 CHKSTP   DC*    0390                                              0390
   8 TCLASS   DC*    0405                                              0405
   6 TSCHL    DC*    0411                                              0411
   1 SUPRMK   DC*    0570                                              0570
                    *
                    *CONSTANTS USED BY PROGRAM
                    *
   1 ONE      DC*    *                                            1    0585
   1 S        DC*    *                                            5    0586
   1 GRPMRK   DC*    *                                                 0587
   1 BLANK    DC*    *                                                 0588
  26 HEAD1    DC*    *          POSTGRAD-CHECK HIGH SCHOOL             0614
   4 CNTR1    DC*    *                                                 0618
  26 HEAD2    DC*    *          HIGH SCHOOL NUMBER ON TAPE             0644
   4 CNTR2    DC*    *                                                 0648
  26 HEAD3    DC*    *          NO HIGH SCHOOL GIVEN-CHECK             0674
   4 CNTR3    DC*    *                                                 0678
                    *
                    *TAPE LABEL ROUTINE
                    *
   7 BEGIN    LCA    GRPMRK           0291                             0679  L  587 291
   8          MCW    %U2              0211             R               0686  M  %U2 211  R  READ *TAPE LABEL
                                                                        0694  2             PRINT *TAPE LABEL
   1          W      *                                                 0695  U  %U2  8      BACKSPACE *TAPE
   5          CU     %U2                               J  G            0700  M  %U1 211  R  READ RTAPE LABEL
   8          MCW    %U1              0211             R               0708  2             PRINT RTAPE LABEL
   1          W      *                                                 0709  1             READ HEADER CARD
   1          R      *                                                 0710  P  001 211     HEADER TO PRINT
   7          MCW    0001             0211                             0717  2             PRINT HEADER CD
   1          W      *                                                 0718  F  1           ADJUST PAPER
   2          CC                                      1                0720  *             HALT & OBSERVE
   1          H      *                                                 0721  M  %U2 211  W  WRITE *TAPE LABEL
   8          MCW    %U2              0211             *               0729  M  588 291     CLEAR PRINT AREA
   7          MCW    BLANK            0291                             0736  2
                    *
   7          SW     PNUMBR-006       PNAME -019                       0736  *  144 124
   7          SW     PSEX             PSCHL -005                       0743  *  151 152
   7          SW     PCLASS-007       PCHKST                           0750  *  165 166
                    *
   4 TPREAD   B      RTAPE                                             0757  B  830
   8          B      ISAPPN           TSTATS-004       A               0761  A  773 35A  K  SKIP IF NOT A 4
   8          B      TP*RIT                                            0769  B  902             APPLICATION
   4          B      ISFRSM           TCATGY           F               0773  B  785 3A6  F  SKIP IF NOT A
   4 ISAPPN   B      TP*RIT                                            0781  B  902             FRESHMAN
   4          B      TP*RIT           SUPRMK           2               0785  B  902 570  S  SKIPS DOWN
   8 ISFRSM   B      TP*RIT           TSTATS           4               0793  B  902 362  K  SKIPS IF NONUSA
   7          MCW    TAPEND           PNUMBR                           0801  M  357 150     MOVE NUMBER
   7          MCW    TNAME            PNAME                            0808  M  384 141     NAME
   7          MCW    TSEX             PSEX                             0815  M  385 151     SEX
   7          MCW    TSCHL            PSCHL                            0822  M  411 157     HIGH SCHOOL CODE
   7          MCW    TCLASS           PCLASS                           0829  M  405 165     RANK IN CLASS
   7          MCW    CHKSTP           PCHKST                           0836  M  390 166     CHECK STOP
   1          P      *                                                 0843  *             PUNCH CARD
   7          MCW    2                SUPRMK                           0844  M  SAA 570     INDICATE CD MADE
   8          B      ISPO             CHKSTP           2               0851  *  BBB 390  P  SKIPS PUNCHED
   4          B      COUNT2                                            0859  *  876
   2 ISPO     SS                                      4                0863  K  4
   7 COUNT1   A      ONE              CNTR1                            0864  A  585 618     ADD TO PG COUNT
   4          U      TP*RIT                                            0872  U  902
   8 COUNT2   B      COUNT3           TSCHL                            0876  *  876 411
   7          A      ONE              CNTR2                            0884  A  585 648     ADD TO HS COUNT
   4          U      TP*RIT                                            0891  U  902
   7 COUNT3   A      ONE              CNTR3                            0895  A  585 678     ADD TO NO HS NO
                    *
   4          B      *TAPE                                             0906  B  BBB
   4          R      TPRLAD                                            0910  R  BBB         READ NEXT RECORD
                    *
                    *END OF ADD ROUTINE
                    *
   4 OUT      B      *UNLOAD                                           2410  U  UBA         UNLOAD WRITE TP
   2 OUT2     CC                                      1                2414  *  1           ADJUST PAPER
   6          R      *RIVAL                                            2416  U  5AB         READ CARDS PRINT
   6          W      *RIVAL                                            2420  M  588         WRITE CARDS PRINT
   2          CC                                      1                2426  *  1           ADJUST PAPER
   4          CS     0244                                              2428  *  244         CLEAR PRINT AREA
                    *
                    *PRINT COUNTS
                    *
   7          MCW    CNTR1            0240                             2432  M  618 240     MOVE PG COUNT
   7          MCW    HEAD1            0234                             2439  M  614 234     PG HEADER
   1          W      *                                                 2446  2             PRINT
   7          MCW    CNTR2            0240                             2447  M  648 240     HS CODE OR COUNT
   7          MCW    HEAD2            0234                             2454  M  644 234     APPROPRIATE HEAD
   1          W      *                                                 2461  2             PRINT
   7          MCW    CNTR3            0240                             2462  M  678 240     NO HS CODE COUNT
   7          MCW    HEAD3            0234                             2469  M  674 234     APPROPRIATE HEAD
   1          W      *                                                 2476  2             PRINT
   4 HALT     H      HALT                                              2477  *  477         END OF JOB
                    *
                    *
     *TAPE           *READ TAPE SUBROUTINE INCLUDING CONSTANTS AND          OMITTED TO SAVE SPACE
                     *TAPE CHECK TOTAL COUNT PRINTINGS
                     *
     *TAPE           *WRITE TAPE SUBROUTINE INCLUDING CONSTANTS AND         OMITTED TO SAVE SPACE
                     *TAPE CHECK TOTAL COUNT PRINTINGS
                     *
              END    BEGIN
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CT  LABEL    OP    A OPERAND        B OPERAND        D        LOC   INSTRUCTION COMMENTS    ADM07
                   CTL   33
                   ORG   0800
                   *
                   *UPDATING CLASS RANK USING RETURNED SUPPLEMENT *          PROGRAM # 7
                   *ARY RECORD CARDS
                   *
                   *THIS PROGRAM CORRECTS THE STORED RANK IN CLASS.
                   *IF A NEW RANK IS SUBMITTED. ADJUSTS THE RECORD
                   *SO THAT IT WILL BE REPREDICTED  AND PUNCHES THE
                   *CURRENT STATUS OF THE APPLICATION INTO THE CARD
                   *FOR SORTING AND FILING
                   *
                   *                  INSTRUCTIONS
                   *
                   *CURRENT ADMISSIONS TAPE ON SU1. WRITE TAPE SU2
                   *CARDS PUT IN PUNCH SIDE W/ NEW RANKS. WHEN
                   *  GIVEN. PUNCHED IN COLS 67-74
                   *LAST CARD W/ WORD LAST IN COLS 76-79
                   *AFTER JOB. CARDS ARE SORTED ON STATUS OF APP-
                   *  LICATION. USING STATUS PUNCHED IN COLS 78-80
                   *HEADER CARD TO CONTAIN RECORD NAME IN COL 80
                   *
                   *DEFINE SYMBOLS ON TAPE RECORD
                   *
 7  TAPENO   DCW   0357                                          0357
 5  TSTATS   DCW   0362                                          0362
 8  TCLASS   DCW   0405                                          0405
 2  ADJRNK   DCW   0413                                          0413
 2  PREDAY   DCW   0428                                          0428
 1  ROYMRK   DCW   0569                                          0569
                   *
                   *DEFINE LOCATIONS ON SUPPLEMENTARY RECORD CARD
                   *
    PNUMBR   DS    0050                                          0050
    NEWCLS   DS    0074                                          0074
    STATS    DS    0080                                          0080
    STATUS   DS    0100                                          0100
                   *
                   *CONSTANTS USED BY PROGRAM
                   *
 1  ABLANK   DCW   *                                             0800
 2  TBLANK   DCW   *                                             0802
 8  BLANKS   DCW   *                                             0810
 4  LAST     DCW   *                                  LAST      0814
 1  GRPMRK   DCW   *                                             0815
                   *
                   *TAPE LABEL ROUTINE
                   *
 7  BEGIN    LCA   GRPMRK           0291                         0816  L 815 291
 8             MCW   SU2              0211              R        0820  M SU2 211 M  READ TAPE LABEL
 1             W                                                 0831  2            PRINT TAPE LABL
 5             CU    SU2                                 B      0837  U SU2 9      BACKSPACE TAPE
 8             RCW   SU1              0211              R        0837  M SU1 211 M  READ STAPE LABLL
 1             W                                                 0845  2            PRINT STAPE LABL
 1             R                                                 0846  1            READ HEADER CARD
 7             MCM   0001             0211                       0847  P 001 211    HEADER TO PRINT
 1             W                                                 0854  2            PRINT HEADER CD
 2             CC                                        1       0855  P 1          ADJUST PAPER
 1             H                                                 0857  .            HALT & OBSERVE
 8             MCW   SU2              0211              W        0858  M SU2 211 W  WRITE STAPE LABL
 7             MCW   ABLANK           0291                       0866  M 800 291    CLEAR PRINT AREA
                   *
 7             SW    PNUMBR-006       NEWCLS-007                 0873  . 044 067    SET WORD MARKS
 6             SW    STATUS-006                                  0880  . 176          IN READ AREA
                   *
 2  CARDRD   P                                          R        0884  4 R          PUNCH & READ
 7  LASTCR   C     STATS -001           LAST                     0886  C 079 814    IF LAST CARD.
 5             B     ENDTP                             S        0893  B 921 S        END TAPE ROUTN
                   *
 6  TAPERD   B     RTAPE                                       0898  B /02          READ TAPE RECORD
 7             C     PNUMBR             TAPENO                 0902  C 050 357    COMPARE NUMBERS
 5             B     NEWRNK                            S        0909  B 952 S      SKIP/ SAME NUMBR
 5             B     NORECD                            U        0914  B 927 U      SKIP/ NO MATCH
 4             B     WTAPE                                       0919  B U71          WRITE AND READ
 4             B     TAPLRD                                      0923  B 898          UNTIL MATCH
                   *
 7  NORECD   MCW   BLANKS             STATUS                     0927  M 810 100    CLEAR PUNCH AREA
 2             P                                         W        0936  4 R          PUNCH & READ
 7             C     STATS -001           LAST                     0938  C 079 814    IF LAST CARD.
 5             B     ENDTP                             S        0943  B 921 S        END TAPE ROUTN
 4             B     TAPLRD6004                                  0948  B 902          IF NOT/ COMPARE
                   *
 7  NEWRNK   C     NEWCLS             BLANKS                     0952  C 074 810    NEW RANK BLANK/
 5             B     STATU                             S        0959  B 100 S        NO UPDATING
 7             C     NEWCLS             TCLASS                  0964  C 074 405    NEW RANK SAME/
 5             B     STATU                             S        0971  B 100 S        NO UPDATING
 7             MCW   NEWCLS             TCLASS                  0976  M 074 405    NOT/ MOVE NEWRNK
 7             MCW   TBLANK             ADJRNK                  0983  M 802 413      CLEAR ADJRNK.
 7             MCW   TBLANK             PREDAY                  0990  M 802 428      PREDICTED APP.
 7             MCW   ABLANK             ROYMRK                  0997  M 800 569      & READY MARK
 7  STATU    MCW   TSTATS             STATUS                     1004  M 362 100    PUNCH STATUS IN
 2             P                                         W        1011  4 R            CARD & READOUT
 6             B     WTAPE                                       1013  B U71        WRITE TAPE. THEN
 6             B     LASTCK                                      1017  B 886          CHECK FOR LAST
                   *
                   *END OF JOB ROUTINE
                   *
 6  ENDTP    B     RTAPE                                       1021  B /02          READ AND WRITE
 6             B     WTAPE                                       1025  B U71            TAPE UNTIL
 6             B     ENDTP                                       1029  B 921            END OF REEL
 6  OUT      B     WUNLDI                                      1033  B 918          UNLOAD. WRITE TP
 2  OUT2     CC                                        1       1037  P 1            ADJUST PAPER
 6             B     EFINAL                                      1039  B 729          PRINT READ ERROR
 6             B     EFINAL                                      1043  B W54          PRINT WRITE ERRS
 4  HALT     H     HALT                                        1047  . 947          END OF JOB
                   *
                   *
    RTAPE          *READ TAPE SUBROUTINE INCLUDING CONSTANTS AND          OMITTED TO SAVE SPACE
                   *TAPE ERROR TOTAL COUNT PRINTING.
                   *
    WTAPE          *WRITE TAPE SUBROUTINE INCLUDING CONSTANTS AND         OMITTED TO SAVE SPACE
                   *TAPE ERROR TOTAL COUNT PRINTING.
                   *
                   END   BEGIN
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INFORMATION SERIES

No. 1—Parents' Ability to Meet College Costs at the University of Massachusetts, February 1962.

No. 2—Chapter 648, Acts of 1962—An act relative to the administration of the University granting certain powers of self-management.

No. 3—Chapter 787, Acts of 1962—An act establishing a medical school within the University of Massachusetts.

No. 4—Chapters 108 and 145, Acts of 1962—Resolve providing for a study relative to improving and extending educational facilities in the Commonwealth.

No. 5—Computer Class Scheduling: Experience at the University of Massachusetts, December 1962.

No. 6—Manual for Computer Class Scheduling: Mechanics of Operation at the University of Massachusetts, April 1963.

No. 8—Parents' Attitudes Toward Higher Education at University of Massachusetts (in process)

MISCELLANEOUS PUBLICATIONS AND STUDIES

Factors Involved in Considering Year Round Operation of Institutions of Higher Education, November 196[illegible].

1962 Report of the Long Range Academic Planning Committee, submitted to the President and University Faculty, June 1962.

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Distribution and Home Town Residence of Massachusetts Undergraduate Students enrolled at the University of Massachusetts, February 1962.

A report on the University of Massachusetts and Its Relationship with the Commonwealth, prepared by the Faculty Committee on Trusteeship and Faculty Salaries, January 1962.

Comparative Tables of Application and Enrollment Data on Massachusetts Institutions of Public Higher Education prepared by the Budget Bureau, C.A.F., April 1962.

Preliminary Enrollment Plans of Massachusetts Colleges and Universities, 1960-1975 (in process).

The above publications will be sent upon request at no cost while supplies last to other colleges and universities, bureaus of research, libraries, educational associations and similar organizations.